OmniaScience

Intangible Capital

IC, 2025 – 21(2): 201-230 – Online ISSN: 1697-9818 – Print ISSN: 2014-3214

https://doi.org/10.3926/ic.3147

Unlocking public sector excellence: The synergy of intellectual capital and digital leadership in tax administration

Amrie Firmansyah*, Ferry Irawan, Suparna Wijaya

Faculty of Economics and Business, Universitas Pembangunan Nasional Veteran Jakarta (Indonesia)

*Corresponding author: amriefirmansyah@upnvj.ac.id

ferryirawan@upnvj.ac.id, suparnawijaya@upnvj.ac.id

Received November, 2024

Accepted April, 2025

Abstract

Purpose: This study examines the influence of intellectual capital components–public human capital, public relational capital, and public structural capital–on organizational performance within Indonesia's Directorate General of Taxes (DGT). Additionally, it explores how digital leadership moderates these relationships to enhance organizational outcomes.

Design/methodology/approach: The study employs primary data collected through a survey involving 195 employees from various Tax Service Offices (KPP) within the Directorate General of Taxes (DGT). These KPPs are distributed across three Regional DGT Offices: South Jakarta II, East Java III, and Central Java II, which were purposively selected to represent diverse tax revenue performance levels. These offices are part of the 34 Regional DGT Offices operating across Indonesia. The analysis used Structural Equation Modeling (SEM) with the SMART PLS software to test the hypothesized relationships and evaluate the impact of intellectual capital and digital leadership on organizational performance.

Findings: The results reveal that public human capital, relational capital, and structural capital positively affect DGT's organizational performance. However, while contributing directly to organizational performance, digital leadership does not significantly moderate the relationship between intellectual capital components and performance. Challenges in integrating digital leadership with existing structures and interpersonal engagements may explain this finding.

Research limitations/implications: The sample, although diverse, may not fully represent all tax offices in Indonesia, limiting the generalizability of results. The unique characteristics of DGT may also influence the applicability of findings to other public sector organizations.

Practical implications: The study recommends targeted training to enhance employees' digital competencies, structural adjustments to support digital transformation and leadership strategies that integrate human capital development with stakeholder engagement. Emphasizing these aspects can significantly improve organizational adaptability and performance.

Social implications: Public sector organizations like DGT can enhance service quality and stakeholder trust by improving intellectual capital management and digital leadership, leading to better compliance and public service outcomes.

Originality/value: This study contributes to the literature by focusing on the public sector organization and integrating digital leadership as a moderating factor, a novel approach to understanding how non-accounting elements can bolster public sector performance.

Keywords: Digital leadership, Intellectual capital, Organizational performance, Public sector accounting, Tax administration

Jel Codes: H83, M41, M12

To cite this article:

Firmansyah, A., Irawan, F., & Wijaya, S. (2025). Unlocking public sector excellence: The synergy of intellectual capital and digital leadership in tax administration. *Intangible Capital,* 21(2), 201-230. https://doi.org/10.3926/ic.3147

1. Introduction

Organizations operating in the era of a knowledge-based economy must leverage their intellectual capital to sustain and enhance their competitive advantage (Sydler, Haefliger & Pruksa, 2014). A key challenge public sector organizations face is how intellectual capital, which encompasses knowledge, skills, experience, and human resources capabilities, can be maximized to enhance organizational performance effectively. Intellectual capital is not only associated with managerial assets but also involves leveraging technology and building strong relational connections with various internal and external parties (Putri & Firmansyah, 2022).

As the knowledge-based economy evolves, the role of intellectual capital becomes increasingly crucial. Physical and technological resources, without the support of competent human resources, cannot be utilized optimally. Therefore, an organization's success is significantly influenced by how intellectual capital, especially human resource capabilities, is harnessed to generate innovation and added value (Osinski, Selig, Matos & Roman, 2017). Intellectual capital forms the foundation for organizational growth and innovation. Although it is not recognized as a measurable asset in financial statements, intellectual capital drives organizations toward better performance (Habib & Dalwai, 2023).

Intellectual capital consists of three main components: human capital, which includes the knowledge and skills of individuals within the organization; structural capital, which encompasses the systems, processes, and infrastructure that support organizational productivity; and customer capital, which involves the organization's relationships with external parties such as customers, suppliers, and business partners (Edvinsson, 1997). Combining these three elements plays a crucial role in creating innovation and enhancing the competitiveness of organizations in both the private and public sectors (Edvinsson, 1997).

Research on intellectual capital has largely focused on the corporate sector, both internationally (Bayraktaroglu, Calisir & Baskak, 2019; Dzenopoljac, Dzenopoljac, Muhammed, Abidi & Kraus, 2024; Janošević, Dženopoljac & Bontis, 2013; Mahmood & Mubarik, 2020; Massaro, Dumay, Garlatti & Dal Mas, 2018; Sardo, Serrasqueiro & Alves, 2018; Xu & Wang, 2018) and in Indonesia (Fauzi & Firmansyah, 2023; Kurniawan, 2023; Metana & Meiranto, 2023; Mursyidah & Saleh, 2023; Tjandra, Lindrawati & Susanto, 2023). However, in the context of the public sector, examinations of the influence of intellectual capital on organizational performance remain limited and require further investigation. Public sector organizations, particularly in Indonesia, have distinct characteristics from the private sector, especially in structure, governance, and operational goals. Therefore, more profound research on how intellectual capital affects public sector organizational performance is essential.

Indonesia's Directorate General of Taxes (DGT) is essential in driving tax revenue, a significant part of government income. Over recent years, the DGT has consistently exceeded its revenue targets, showcasing strong performance (Badan Kebijakan Fiskal, 2023). However, challenges remain in maintaining this growth, such as adapting to economic changes, improving taxpayer compliance, and leveraging technology for better efficiency. Indonesia's Directorate General of Taxes (DGT) is a critical pillar in national development and governance, leveraging advanced technology, systematic risk management, and data-driven strategies to address modern economic challenges (Direktorat Jenderal Pajak, 2024). Through the Coretax system, DGT has digitized 21 core tax processes, enhancing administrative efficiency and data accuracy, while Business Intelligence (BI) and

Compliance Risk Management (CRM) enable precise oversight of taxpayer compliance risks (Direktorat Jenderal Pajak, 2024). DGT's governance framework, supported by Compliance Committees, ensures fair, targeted policies and consistent enforcement, contributing to its achievement of tax revenue targets from 2021 to 2023 and maintaining a tax buoyancy ratio above 1 (Direktorat Jenderal Pajak, 2024). Internationally, DGT actively engages in initiatives like the Automatic Exchange of Information (AEOI) and adheres to the Common Reporting Standard (CRS), reinforcing global tax transparency and Indonesia's fiscal competitiveness (Direktorat Jenderal Pajak, 2024). These innovations and strategic contributions position DGT as a leader in Indonesia's public sector and a global model for fiscal governance and modernization.

This study examines intellectual capital's influence on organizational performance, focusing on the DGT as an organization in the public sector. The intellectual capital of Indonesia's Directorate General of Taxes (DGT) plays a vital role in supporting the achievement of the Sustainable Development Goals (SDGs) by enhancing public service efficiency, transparency, and good tax governance. The competence of human resources, modern technologies like e-filing and e-billing, and strong relational capital contribute to SDG 8 by facilitating sustainable economic growth through efficient tax policies (Direktorat Jenderal Pajak, 2024; United Nations, 2022). DGT's structural capital aligns with SDG 9 by promoting innovation and technological efficiency in the public sector (Direktorat Jenderal Pajak, 2024; United Nations, 2022). Additionally, its relational capital supports SDG 16 by strengthening transparent and inclusive institutions through positive interactions with taxpayers (Direktorat Jenderal Pajak, 2024; United Nations, 2022). Furthermore, DGT contributes to SDG 17 by fostering international collaborations, such as the Automatic Exchange of Information (AEOI), to enhance domestic resource mobilization essential for sustainable development (Direktorat Jenderal Pajak, 2024; United Nations, 2022).

Public intellectual capital (IC) management varies across countries, tailored to their unique contexts and needs. In Europe, trust, transparency, and governance are emphasized, with knowledge sharing playing a significant role in fostering public trust, as seen in Scandinavia's collaborative approach (Matos, Vairinhos & Matos, 2018; Strazzullo, Cricelli & Grimaldi, 2024). In the Czech Republic, public universities prioritize relational capital, followed by structural and human capital, reflecting stakeholder needs such as student preferences for institutional relationships and good governance (Kuralová & Margarisová, 2016). In Italy, public universities highlight human capital to promote transparency and demonstrate excellence in teaching and research, aligning with stakeholder accountability and institutional competitiveness (Nicolò, Raimo, Polcini & Vitolla, 2021; Strazzullo et al., 2024). Spain incorporates human, structural, and relational capital into a framework that enhances transparency and value creation through education and research (Ramírez, Manzaneque & Priego, 2017). Romania connects human capital and organizational structure with productivity, optimizing intangible resources like knowledge and organizational capabilities (Morariu, 2014). IC contributes positively to public organizational performance in Mexico, focusing on human resource competencies and structural optimization to improve governance and accountability (Melo, Verástegui & Herrera, 2021). South Korea's public research institutions, such as ETRI, develop IC indicators encompassing human, structural, and relational capital to support innovation and national development (Yi, 2012). These varied approaches demonstrate how countries adapt IC management to enhance transparency, accountability, and organizational performance.

Building upon this global perspective, this study distinguishes itself by focusing on the public sector, particularly the Directorate General of Taxes (DGT) in Indonesia, while most prior research has emphasized the corporate sector. Furthermore, the study integrates digital leadership as a moderating variable in the relationship between intellectual capital and organizational performance, highlighting its critical role in the public sector. Digital leadership defined as a leader's ability to navigate the modern era's rapid and dynamic digital transformation (Chatterjee & Sreenivasulu, 2019), enhances the impact of intellectual capital by fostering productivity and efficiency. Leaders with strong digital capabilities utilize technology to streamline organizational processes and encourage members to improve their digital literacy, strengthening the synergy between intellectual capital and organizational performance (Chatterjee & Kar, 2018). This innovative approach positions digital leadership as pivotal in optimizing intellectual capital management for public sector success.

Digital leadership is a pivotal enabler for transforming intellectual capital into actionable outcomes in the public sector, particularly through technology and employee performance enhancement. It is especially critical for organizations like DGT, which face persistent challenges in fully leveraging technological advancements. Digital leadership bridges human and structural capital with technology-driven processes, fostering heightened efficiency, innovation, and adaptability in public service delivery. Studies highlight that digital leadership positively impacts organizational performance by improving employee productivity, fostering innovation, and supporting a balanced work-life environment (Chatterjee, Chaudhuri, Vrontis & Giovando, 2023; Shin, Mollah & Choi, 2023). This study envisioned digital leadership as a moderating force that enhances the relationship between intellectual capital and organizational performance. Strong digital leadership ensures that intellectual capital–human expertise, structural systems, and relational networks–operates cohesively to amplify public sector efficiency and drive measurable improvements in organizational outcomes.

This study makes substantial contributions both academically and practically. Academically, it addresses a gap in the literature by exploring the role of intellectual capital in the public sector, an area that remains under-researched. By incorporating digital leadership as a moderating variable, the research introduces a novel perspective on how non-accounting elements can enhance the relationship between intellectual capital and organizational performance in the public sector. Practically, it offers actionable policy recommendations for the DGT, emphasizing the development of intellectual capital management to support organizational performance. These insights align with the DGT's tax reform initiatives, mainly its focus on strengthening human resource capacity, optimizing information technology systems, and refining business processes–all underpinned by effective digital leadership to drive transformation.

Furthermore, this study contributes to understanding the DGT's tax reform pillars, which include organizational strengthening, workforce development, process improvement, system and database upgrades, and regulatory enhancements. Future research could build on these findings by exploring cross-national comparisons to understand how different governance structures and cultural contexts influence the interaction between intellectual capital and digital leadership. Additionally, longitudinal studies could assess the sustained impact of digital leadership on intellectual capital development and organizational performance over time. Research could also delve into specific sectors or regions to uncover localized strategies for integrating digital transformation within intellectual capital frameworks, thereby broadening the global applicability of these findings.

2. Literature Review and Hypothesis Development

The competence of DGT employees plays a significant role in enhancing organizational performance through efficient administrative duties and maintaining strong relationships with taxpayers. Competent employees in taxation can perform tasks with greater accuracy, minimize errors, and ensure smooth data management and tax collection processes, improving overall operational efficiency. Freeman (1984) and Freeman, Dmytriyev and Phillips (2021), through stakeholder theory, emphasizes that employees, as internal stakeholders, are responsible for fostering positive relationships with external stakeholders, such as taxpayers. This relationship boosts taxpayer trust in DGT, encouraging timely compliance with tax obligations and directly contributing to improved organizational performance. In line with the new stakeholder theory (Neckebrouck & Kryscynski, 2024), employees can be seen as part of the nexus of contracts, where they contribute to the creation of value not only for shareholders but also for other stakeholders, such as taxpayers. This theory emphasizes the collaborative role of stakeholders in enhancing organizational performance, with value being distributed fairly among all stakeholders, including employees who play a critical role in driving organizational success.

From the resource-based view (RBV), Barney (1991) highlights that valuable, rare, inimitable, and non-substitutable human capital is a strategic resource essential for organizational success. Employees at DGT with adequate skills and competence enhance service quality, expedite tax collection, and reduce administrative errors. Rockwell (2019) supports this by demonstrating that robust human capital is key to organizational efficiency and productivity. Ednoer, Enita and Firmansyah (2022) found that human capital significantly influences public sector performance, particularly regarding tax collection effectiveness at DGT. Their research indicated that increasing employee competence in managing tax administration can improve

organizational efficiency overall, supporting the hypothesis that public human capital positively contributes to DGT's performance by enhancing service quality and accelerating tax collection. It aligns with the New Stakeholder Theory, which emphasizes that the development of internal stakeholders, such as employees, is essential for achieving sustainable performance, benefiting all stakeholders involved (Neckebrouck & Kryscynski, 2024).

Dewabrata, Firmansyah, Andrias, Tarigan and Trisnawati (2022) also validated that human capital is crucial in the public sector, showing that better employee competence enhances administrative accuracy and efficiency, which in turn helps achieve tax revenue targets. In the DGT context, well-managed human capital aids the organization in meeting strategic goals and boosting performance. Similarly, Ramírez, Tejada and Sánchez (2022) found that human capital positively impacted local government performance in Spain, especially in improving operational efficiency, paralleled in DGT's context, where better employee competence enhances tax administration performance. Indrawati and Sembiring (2019) underlined human capital's role in boosting administrative efficiency and public service quality in local governments, a concept that applies to DGT. Sun, Pellegrini, Wang and Yu (2021) pointed out that developing human capital in the public sector is fundamental for enhancing operational efficiency and organizational performance. For DGT, supporting employee competence development helps address tax administration challenges and reinforces taxpayer trust. Thus, improving employee competence at DGT strengthens organizational performance by fostering better tax compliance through trust and enhancing operational efficiency by minimizing administrative errors and accelerating tax collection.

H_1: Public human capital has a positive significant effect on organizational performance.

Freeman et al. (2021) emphasize the crucial role of organizational capital in managing relationships between an organization and its external stakeholders, which is essential for the DGT's role as the manager of state tax revenue. To succeed, the DGT must develop systems and an organizational culture that fosters innovation, collaboration, and transparency in tax processes. Public organizational capital includes internal procedures and technology systems that enhance stakeholder interactions. An example of innovation at the DGT is evident in its e-filing and e-billing systems, which promote a technology-oriented and efficient culture. These systems facilitate online tax reporting, reducing the need for physical interactions and expediting tax administration, thus enhancing transparency and trust among taxpayers, who are key external stakeholders (Freeman, 1984; Freeman et al., 2021).

In the context of new stakeholder theory (Neckebrouck & Kryscynski, 2024), the DGT's organizational capital is seen as part of a nexus of contracts, where the organization creates value not just for shareholders but for all stakeholders, including taxpayers. By developing robust systems like e-filing and e-billing, the DGT ensures that internal and external stakeholders, employees, and taxpayers benefit from efficient, transparent, and fair value distribution. It aligns with the theory's view that economic value should be shared with stakeholders in a way that exceeds their direct contributions, reinforcing a collaborative approach in public sector management.

Barney (1991) states in the context of RBV that organizational capital is a strategic resource that is valuable and difficult to replicate, especially when it involves tailored systems supporting complex operations like those at the DGT. By implementing structured systems, the DGT reduces reliance on manual processes, improving overall operational efficiency. Rockwell (2019) supports this perspective, asserting that effective use of structural resources grants organizations a sustainable competitive advantage. The DGT's investment in e-filing and e-billing demonstrates how organizational capital can drive efficiency and innovation, making these systems an integral part of its strategic resources.

Research by Ramírez et al. (2022) shows that intellectual capital, including organizational capital, plays a significant role in local government performance in Spain, where structured systems and clear procedures improved transparency and accountability. This finding aligns with the DGT's context, where strong systems support efficient tax management. Dewabrata et al. (2022) also affirm that organizational capital supported by robust systems and technology directly enhances public sector performance, which applies to the DGT.

Technological systems like e-filing and e-billing used by the DGT exemplify the strategic use of organizational capital, streamlining tax processes, boosting internal efficiency, and reducing administrative burdens for taxpayers. These technologies also maintain transparency and accountability in tax management, reinforcing stakeholder relationships (Ednoer et al., 2022). It showcases how the DGT can leverage its organizational capital for greater efficiency in tax collection.

Under stakeholder theory, the DGT should cultivate an organizational culture and systems that strengthen relationships with external stakeholders. By offering transparent and efficient technology for taxpayer interactions, the DGT enhances its credibility and accountability. Such systems enable taxpayers to better engage with and understand their obligations, thus improving compliance. The DGT's structured procedures, innovation-driven culture, and advanced technology contribute to operational efficiency, transparency, and trust, supporting its strategic goals in managing state tax revenue. New stakeholder theory further emphasizes that by balancing the interests of both internal and external stakeholders, the DGT can sustain its competitive advantage while fostering an inclusive, value-driven environment.

H_2: Public organizational capital has a positive significant effect on organizational performance.

The strong relationship between DGT and external stakeholders is crucial for fostering public trust in the tax system and enhancing compliance. Stakeholder theory, as outlined by Freeman (1984) and Freeman et al. (2021), emphasizes the importance of maintaining positive relationships with external stakeholders to achieve operational success. For the DGT, prioritizing taxpayer satisfaction and trust directly increases national tax revenue. Relational public capital includes interactions such as providing clear information, offering fast and transparent services, and promoting an understanding of tax obligations. These interactions build trust, encouraging taxpayers to comply with tax reporting and payments.

In line with the new stakeholder theory (Neckebrouck & Kryscynski, 2024), the DGT's relationships with external stakeholders, like taxpayers, contribute to value creation and distribution. This theory posits that the organization operates as a nexus of contracts, where value is co-created and shared between internal and external stakeholders, ensuring that benefits are distributed beyond shareholders to include taxpayers, employees, and the community. For the DGT, fostering these collaborative relationships supports a more inclusive and sustainable approach to tax administration, benefiting all stakeholders involved.

Social capital theory emphasizes that social relationships and networks create resources that can be mobilized to support both individual and collective actions. Coleman (1988) defines social capital as the resources embedded in social structures, including obligations, expectations, information channels, social norms, and sanctions, that enable better coordination and cooperation among individuals. Social capital is essential for fostering collaboration, particularly in a public organization like the DGT, where effective cooperation is necessary to meet complex tax administration goals. Coleman also notes that social capital plays a significant role in human capital creation, such as the influence of family and community on children's education. In the context of DGT, strong relationships and networks help improve communication and coordination among stakeholders, fostering better compliance and efficiency in tax processes.

Nahapiet and Ghoshal (1998) categorize social capital into three main dimensions: structural, relational, and cognitive. Structural capital involves the patterns of relationships within a social network, including network density and configuration. Relational capital refers to the nature of interpersonal relationships, such as trust and shared norms developed through repeated interactions. Cognitive capital involves shared values and meanings that enable collective understanding within a community or organization. These dimensions of social capital play a key role in creating intellectual capital and provide organizations with a competitive advantage. For the DGT, strong relational and cognitive capital helps to build trust, cooperation and shared understanding, which is crucial for achieving high levels of tax compliance and operational efficiency.

Adler and Kwon (2002) describe social capital as goodwill generated from social networks, which can be leveraged for various purposes, including enhancing innovation, improving cross-functional team effectiveness, and reducing turnover. In the DGT context, social capital enables the organization to foster long-term, mutually beneficial relationships with taxpayers, thereby increasing compliance and enhancing overall performance.

However, they also caution that social capital has risks, including the potential exclusivity of networks, which could limit access to resources for others. The DGT must manage this risk carefully to ensure all stakeholders benefit from its digital and social initiatives. van Bakel and Horak (2024) further explain the importance of social capital in managing human resources, particularly in multinational organizations. Social capital contributes to better coordination and cross-cultural cooperation, which supports learning and innovation within global organizations. Similarly, in the DGT's context, social capital helps improve collaboration between the government and taxpayers, ensuring that tax policies are understood and complied with, leading to better tax revenue management.

Technological systems like e-filing and e-billing implemented by the DGT play an essential role in supporting relational capital by enabling efficient interactions with taxpayers, enhancing transparency, and simplifying tax processes. E-Filing is an electronic system that allows taxpayers to submit their tax returns (Surat Pemberitahuan, SPT) online (Direktorat Jenderal Pajak, 2024). This system provides numerous benefits, including time savings, reduced manual errors, and simplified tax reporting. Taxpayers can access e-filing through the official DGT website (DJP Online) or third-party applications integrated with the DGT system. Once submitted, data entered through e-filing is directly transferred into the DGT's system, facilitating easier monitoring and compliance analysis. E-filing also supports the DGT's efforts to reduce the use of physical documents, aligning with sustainability and administrative efficiency goals.

On the other hand, E-Billing is an electronic tax payment system that allows taxpayers to generate billing codes online (Direktorat Jenderal Pajak, 2024). These codes serve as payment identifiers for various payment channels, such as banking or official payment apps (Direktorat Jenderal Pajak, 2024). E-billing allows taxpayers to make payments anytime, anywhere, without visiting a tax office or manual payment counter. Additionally, this system ensures that all tax payments are automatically recorded in the DGT's system, enhancing data accuracy and transparency.

Basri (2015) highlights that the DGT's investment in technology systems like e-filing and e-billing helps build trust and establish long-term, mutually beneficial relationships with the public. These technologies also enhance transparency and minimize errors in tax reporting, boosting compliance. Social Capital Theory underscores how these technological systems facilitate efficient communication, trust-building, and collaboration between the DGT and taxpayers, strengthening relational capital.

Research by Ramírez et al. (2022) underscores the importance of relational capital in the public sector, showing that local governments in Spain improved transparency and accountability through strong stakeholder relationships. This insight is relevant for the DGT, as positive taxpayer relations facilitate increased tax revenue through better compliance. Engaging effectively with stakeholders helps the DGT identify taxpayer challenges and provide timely, accurate solutions, strengthening organizational performance. In the RBV context, well-managed relational capital gives the DGT a competitive edge in efficiently managing tax revenue. Active stakeholder engagement, supported by robust technology, positions the DGT as a trustworthy institution, ultimately enhancing organizational performance and achieving strategic objectives.

H_3: Relational public capital has a positive significant effect on organizational performance.

Digital leadership within the DGT is crucial for modernizing tax technology, such as e-filing and e-billing, enabling taxpayers to report and pay taxes efficiently while reducing manual administrative efforts and enhancing transparency. The unified theory of acceptance and use of technology (UTAUT), developed by Venkatesh, Morris, Davis and Davis (2003), provides a comprehensive framework for understanding technology acceptance. The model highlights key constructs influencing technology adoption, such as performance expectancy, which suggests that individuals are more likely to adopt technology if they believe it will improve their performance. In the context of DGT, e-filing, an electronic system that allows taxpayers to submit tax returns online, enhances performance by streamlining the tax reporting process, reducing manual errors, and saving time for both taxpayers and the DGT (Direktorat Jenderal Pajak, 2024). It aligns with performance expectancy, as taxpayers and DGT employees benefit from digital systems' efficiencies. E-billing, another key technology, allows taxpayers to create online billing codes for tax payments (Direktorat Jenderal Pajak, 2024). This system ensures automatic recording of payments, improving accuracy and transparency in tax revenue collection, thus fostering a more

efficient and reliable tax system, as suggested by the effort expectancy construct of UTAUT. Effort expectancy emphasizes how the perceived ease of using technology impacts its adoption, and in terms of e-billing, the ability to make payments at any time and from any location simplifies the process for taxpayers, encouraging widespread usage.

Tagscherer and Carbon (2023) highlight that effective digital leadership promotes technology adoption and ensures its integration within the organizational framework, driving innovation and efficiency. It resonates with UTAUT's facilitating conditions, which refer to the organizational and technical resources available to support technology adoption. For the DGT, facilitating conditions such as training programs, technical infrastructure, and support systems are vital for successfully implementing e-filing and e-billing. It is especially pertinent for the DGT, where tax complexities and evolving regulations demand robust digital strategies. Gilli, Lettner and Guettel (2024) stress that leaders who seamlessly integrate digital technology foster organizational innovation, enhancing operational efficiency and responsiveness, which is further aligned with facilitating conditions in UTAUT, as these leaders ensure the right resources are in place to facilitate the adoption of new technologies.

From the stakeholder theory perspective, Freeman et al. (2021) emphasize that an organization's success hinges on addressing stakeholder expectations, including those of taxpayers. In this context, digital leadership shapes transparent, responsive service systems, bolstering public trust and tax compliance and enhancing organizational performance. UTAUT's social influence construct also plays a role here, suggesting that the perceptions of others, such as peers or supervisors, influence an individual's intention to adopt technology. Chatterjee and Kar (2018) and Chatterjee and Sreenivasulu (2019) reinforce that digital technology empowers organizations to understand stakeholder needs and improve the user experience in tax services, further emphasizing the role of social influence in driving adoption.

Within the Resource-Based View (RBV) framework, Barney (1991) explains that leveraging digital technology optimally is a strategic asset, valuable, hard to replicate, and provides a competitive edge. Digital leadership is a distinctive resource for the DGT, facilitating technology use that drives efficiency and innovation, reducing costs, improving accuracy, and enhancing transparency. UTAUT's performance expectancy and facilitating conditions demonstrate how digital leadership, by providing resources and guidance, enhances operational effectiveness and ensures that technology adoption contributes to organizational success.

However, as Tigre, Curado and Henriques (2023) note, digital leadership faces challenges in ensuring comprehensive implementation across all levels. Barriers like resistance to change and skill gaps can limit the effectiveness of technological advancements. UTAUT's moderating variables, such as age, gender, and experience, offer insight into how individual characteristics might influence the adoption of new technologies, further highlighting the importance of overcoming these challenges (Momani, 2020). Thus, the DGT must prepare its workforce for adaptation, ensuring readiness for changes initiated by digital leadership. Digital leadership fosters technology adoption and strategically enhances DGT's performance through innovation and efficiency. Freeman (1984) posits that technology should align with stakeholder needs, and Rockwell (2019) adds that leadership should focus on interpersonal relationships and human capacity. Digital leadership within the DGT is crucial in modernizing tax technology, such as e-filing and e-billing, improving efficiency and transparency, and reducing manual administrative efforts. By fostering the adoption of digital systems, digital leadership enhances organizational performance, stakeholder trust, and tax compliance, while addressing challenges such as resistance to change.

H_4: Digital leadership has a positive significant effect on organizational performance.

Stakeholder theory, as introduced by Freeman (1984) and expanded by Freeman et al. (2021), underscores the necessity for organizations to understand and address the needs of both internal and external stakeholders. For the DGT, internal stakeholders such as employees are vital for fostering superior organizational performance. Their active participation ensures seamless tax services, promoting taxpayer satisfaction and compliance. Freeman et al. (2021) assert that successful organizations cultivate strong relationships with all stakeholders, enhancing their effectiveness. It aligns with the new stakeholder theory (Neckebrouck & Kryscynski, 2024), which views organizations as a nexus of contracts where various stakeholders contribute to creating value. In this context, DGT employees, as internal stakeholders, play a central role in enhancing the tax administration

system by driving efficient processes and ensuring that external stakeholders, such as taxpayers, benefit from a transparent and efficient system.

In line with the Resource-Based View (RBV) framework by Barney (1991), internal resources like human capital are essential for sustaining competitive advantage. Public human capital, characterized by the skills, knowledge, and competence of DGT employees, can significantly enhance organizational performance when effectively managed. Barney (1991) highlights that leveraging these unique resources strategically positions an organization ahead of its peers, creating a competitive edge. This insight is reinforced by new stakeholder theory, which suggests that internal stakeholders, particularly employees, contribute to long-term success through their ability to create value. Strong internal human capital allows the DGT to better serve its external stakeholders, enhancing trust and tax compliance.

Digital leadership reinforces the relationship between public human capital and organizational performance. Chatterjee and Kar (2018) and Chatterjee and Sreenivasulu (2019) argue that digital leadership involves integrating technology with human resources, ensuring employees are well-equipped to use technology to enhance value. Effective digital leaders facilitate skill development, enabling employees to adapt and excel in technological environments, thereby boosting service quality and efficiency. UTAUT provides a theoretical framework to understand how digital leadership, performance expectancy, and effort expectancy can influence the adoption and use of technology (Venkatesh et al., 2003). In the DGT context, performance expectancy suggests that employees will be more likely to embrace digital tools like e-filing and e-billing if they believe these technologies will improve their performance. Similarly, effort expectancy indicates that the ease of using these technologies will play a critical role in employee adoption, further enhancing organizational efficiency.

Tagscherer and Carbon (2023) emphasize that aligning technology strategy with human resource development is vital for synchronized progress in skill enhancement and technology adoption. New stakeholder theory also supports this, as technology adoption and human capital development are interlinked, contributing to the overall value created for internal and external stakeholders. Digital leadership ensures that technological integration is effective, enhancing DGT employees' capabilities and the public service they provide. Tigre et al. (2023) further note that digital leadership impacts the development of adaptive human capital, equipping employees to meet technological demands. Effective leaders promote training and skill-building, allowing DGT employees to deliver more efficient services. UTAUT highlights how facilitating conditions, such as organizational support and resources, are critical in ensuring employees can effectively use technology. Müller, Konzag, Nielsen and Sandholt (2024) stress that comprehensive digital leadership integrates technology seamlessly into operations and human capital management, fostering operational efficiency. Yao, Tang, Liu and Boadu (2024) highlight that without consistent digital strategy implementation, human capital development related to digitalization may not effectively influence performance.

Ednoer et al. (2022) stress the need for developing employee capabilities to manage technological transitions at the DGT, noting that improved digital skills enhance efficiency and stakeholder relations. Dewabrata et al. (2022) confirm that technology's successful implementation in public organizations relies on leadership's ability to merge it with human resources. Freeman (1984) and Rockwell (2019) conclude that synergy among leadership, employees, and technology is crucial for achieving optimal performance. Effective digital leadership, supported by adequate digital skills and strategic technology use, bolsters public human capital and strengthens an organization's competitive position, particularly in rapidly changing technological landscapes.

H_5: Digital leadership strengthens the positive effect of public human capital on organizational performance.

Digital leadership theory in DGT underscores the critical role of leaders in integrating digital technology to strengthen public organizational capital, including systems, procedures, and culture that support operational efficiency. Effective digital leadership maximizes the potential of technologies like e-filing and e-billing, reducing administrative burdens and enhancing transparency. UTAUT (Venkatesh et al., 2003) helps explain how performance and effort expectancy influence the adoption of these technologies. In the context of DGT, these technologies improve performance by streamlining the tax reporting and payment process, making it easier for taxpayers to comply. Gilli et al. (2024) highlight that strategic technology adoption by leaders ensures its optimization for efficient and transparent tax management.

Within the RBV framework by Barney (1991), organizational capital enhanced by digital technology is a valuable, hard-to-replicate resource. Competent digital leaders can leverage this technology to streamline tax procedures, accelerate processes, and minimize errors, ultimately boosting overall performance. Barney (1991) emphasizes that unique assets, such as advanced digital tools and leadership skills that support their use, give the DGT a competitive edge by fostering accurate and efficient operations. New stakeholder theory (Neckebrouck & Kryscynski, 2024) aligns with this, underscoring the importance of managing relationships with internal and external stakeholders to create value. In the DGT's context, digital leadership drives internal efficiency and strengthens relationships with taxpayers and other external stakeholders by improving transparency and ease of compliance with tax laws.

Digital leadership is expected to strengthen the DGT's relationships with stakeholders, including taxpayers, by delivering faster and more transparent services, thereby increasing trust and satisfaction. Organizational success hinges on meeting stakeholder expectations (Freeman et al., 2021). New stakeholder theory complements this perspective, suggesting that successful organizations create and distribute value among all stakeholders, internal and external, ensuring that technological advances like e-filing and e-billing benefit not only the organization but also its stakeholders, especially taxpayers. Tagscherer and Carbon (2023) note that digital leaders must blend technology with an innovation-driven culture to maximize its impact. In the DGT, this means ensuring technology boosts internal efficiency while enhancing relationships with external stakeholders, such as taxpayers and government bodies.

Chatterjee and Kar (2018) and Chatterjee and Sreenivasulu (2019) argue that leaders proficient in digital technology can guide organizations in adopting efficient systems and empowering employees to utilize these tools effectively. UTAUT's social influence construct explains how the behavior of others, such as digital leaders, can shape employees' intentions to adopt new technologies. Tigre et al. (2023) add that successful digital leadership requires aligning strategies with technological and human aspects. Müller et al. (2024) stress that such leadership must promote adaptable structures to integrate technology seamlessly. Yao et al. (2024) emphasize the importance of consensus and a robust digital strategy. Digital technology cannot fully strengthen organizational capital or improve performance without clear strategy and coordination.

Ednoer et al. (2022) note that integrating digital tools enhances public sector efficiency. In the DGT, tools like e-filing and e-billing improve tax collection efficiency and reduce errors. New stakeholder theory underscores that digital leadership is key to managing stakeholder expectations while enhancing public service delivery. Dewabrata et al. (2022) affirm that robust technology integration significantly impacts public organizations, enhancing efficiency and accountability. Leaders who harness digital tools optimize operations, expedite processes, and build stakeholder trust in the DGT.

H_6: Digital leadership strengthens the positive effect of public organizational capital on organizational performance.

Digital leadership enhances the relationship between relational public capital and organizational performance at the DGT. Relational public capital refers to the connections DGT maintains with external stakeholders, such as taxpayers and the central government. Leaders proficient in digital technology can improve these interactions through advanced communication systems, enabling more transparent, accessible, and faster tax services, which boosts trust and compliance. According to UTAUT, performance expectancy suggests that stakeholders will embrace technology if they perceive it improves their ability to perform tasks more effectively (Venkatesh et al., 2003). In the DGT context, the implementation of digital tools like e-filing and e-billing improves performance by streamlining tax procedures and providing a more efficient service. Gilli et al. (2024) stress that digital leadership facilitates the use of technology to enhance communication with stakeholders, leading to greater transparency and responsiveness. This trust fosters higher taxpayer compliance, directly supporting DGT's performance. Within the RBV framework, relational capital bolstered by digital leadership is a strategic asset that is hard to replicate. Digital leaders help the DGT harness technology for improved stakeholder interactions, providing a competitive edge by fostering trust-based relationships that enhance operational efficiency and tax management performance.

Digital technology leaders are expected to strengthen ties with stakeholders by improving service access, speeding responses, and ensuring transparent communication. New stakeholder theory emphasizes that

organizations should engage all internal and external stakeholders in value creation and distribution (Neckebrouck & Kryscynski, 2024). For the DGT, digital leadership facilitates value creation by enhancing the quality of interactions between the organization and its stakeholders. Freeman (1984) notes that an organization's success hinges on sustaining strong stakeholder relationships. Social capital theory further supports this view, explaining that trust and relationships form the foundation of social capital (Coleman, 1988; Nahapiet & Ghoshal, 1998). Relational capital, which includes the trust and norms developed between the DGT and taxpayers, is critical in enhancing compliance and cooperation, thus fostering stronger public sector performance. Tagscherer and Carbon (2023) affirm that digital leaders who integrate technology into external relations facilitate efficient, transparent stakeholder interactions. Chatterjee and Kar (2018) and Chatterjee and Sreenivasulu (2019) highlight that digital leadership improves information flow, which is crucial for trust and collaboration with external parties. Relational capital is pivotal in building the trust necessary for smooth interactions between the DGT and its stakeholders.

Tigre et al. (2023) underscore the importance of using digital systems for solid communication with stakeholders, supporting social capital theory by stressing how digital tools enhance collaboration and trust, which are crucial for organizational success. Müller et al. (2024) point out that technology led by effective digital leaders enhances interaction efficiency, positively impacting performance. Digital leaders leverage technology not only for operational efficiency but also for building stronger connections with stakeholders, which in turn strengthens relational capital.

Yao et al. (2024) emphasize that digital leadership strategies should focus on effective communication and stakeholder interaction. This ensures that technology is used to build strategic external relationships, supporting organizational goals. New stakeholder and social capital theories complement this idea by showing how leadership, when combined with technology, can create more substantial and more productive stakeholder relationships. Ednoer et al. (2022) confirm that integrating digital technology in managing external relationships enhances tax service efficiency and accuracy, strengthening ties with taxpayers. Dewabrata et al. (2022) show that appropriate technology use, backed by effective digital leadership, boosts relational capital, enabling public organizations to improve performance. Leaders who deploy digital technology effectively build trust and foster efficient interactions with taxpayers and other stakeholders, directly impacting DGT's performance.

H_7: Digital leadership strengthens the positive effect of relational public capital on organizational performance

3. Research Methodology

This quantitative study focuses on the relationships between public human capital, public structural capital, public relational capital, and digital leadership within the context of the DGT. The study population includes employees from various tax service offices (KPP) across Indonesia who work under the regional DGT offices. The sample consists of 195 respondents, selected using a purposive sampling method, a non-probability sampling technique. Purposive sampling was employed to select respondents based on specific criteria, such as their direct involvement in managing tax revenue at the KPP. Respondents included positions such as Section Heads of Supervision, Section Heads of Audit, Valuation, and Collection (P3), Tax Auditors, Valuers, Tax Counselors, Account Representatives, and Bailiffs.

The data was collected through a digital questionnaire distributed via a Google Forms link, coordinated with the DGT. The data collection period spanned from May 2024 to July 2024. The study focused on respondents from three Regional DGT Offices: South Jakarta II, East Java III, and Central Java II. These offices were purposively selected based on their varying levels of tax revenue performance, representing a diverse range of organizational contexts. According to the 2023 Annual Report of the Directorate General of Taxes, these regional offices also differ in administrative scope, taxpayer composition, and digital infrastructure maturity (Direktorat Jenderal Pajak, 2024). For instance, South Jakarta II manages high-income individual taxpayers and large corporations with complex digital transactions. In contrast, East Java III includes more small-to-medium enterprises (SMEs) and has been actively piloting risk-based audit initiatives. Central Java II, conversely, reflects a mix of rural and semi-urban economic activity with moderate adoption of core tax system tools. These variations provide meaningful organizational diversity and offer valuable perspectives on how intellectual capital is utilized and how digital leadership practices manifest across different institutional settings. This sample was designed to reflect the

broader population of 34 Regional DGT Offices across Indonesia (Direktorat Jenderal Pajak, 2024), ensuring geographical and operational diversity.

The study's use of purposive sampling ensures that the respondents possess in-depth knowledge about tax revenue management, strengthening the study's validity by providing comprehensive insights into the subject matter. However, the non-probability sampling method limits the generalizability of the findings, and the interpretation should be cautiously (Sekaran & Bougie, 2016). The questionnaire instrument included Likert-scale questions to measure respondents' perceptions of the variables and demographic questions to support further analysis.

The initial part of the questionnaire includes demographic and professional information about the respondents, such as age, education, and length of service, to support further analysis. This data is useful in assessing the respondent profile and how these demographic factors influence their responses regarding DGT performance. Respondents were purposively selected to ensure direct involvement in tax revenue management within relevant KPP units.

The dependent variable in this study is the organizational performance of the DGT. Organizational performance (OP) measurement uses the yearly Key Performance Indicators (KPIs) the DGT sets (Direktorat Jenderal Pajak, 2024). These KPIs include:

Code	Statement Item
OP1	The achievement of key organizational performance targets is being executed optimally.
OP2	Improvement in taxpayer compliance with the timely submission of annual tax returns, under the applicable Standard Operating Procedures.
OP3	Effective delivery of education and services to stakeholders without any significant barriers or obstacles.
OP4	Efficient and optimal implementation of collection and audit activities.
OP5	Effective and optimal supervision of task execution.
OP6	Human resources possess the necessary competencies for the tasks and functions assigned.
OP7	Employees' ability to implement integrity values in their daily work.
OP8	The quality of services delivered to stakeholders aligns with organizational standards.
OP9	The effectiveness of organizational performance dialogues in improving employee performance.
OP10	Budget realization meets the target absorption rate set by the organization.

Table 1. Organizational Performance Indicators

This study also employs three independent variables: public human capital, public structural capital, and public relational capital. Public human capital refers to the knowledge, skills, and competencies of DGT employees that are relevant to their tax duties. The indicators for public human capital, public structural capital, and public relational capital are adapted from previous studies, including Dewabrata et al. (2022) and Ednoer et al. (2022), who adopted indicators from Campos, Salmador and Merino (2006). The following table outlines the specific questionnaire items used to measure these variables:

Code	Statement Item
PHC1	The commitment to the job is reflected in the execution of tasks within the organization.
PHC2	The ability to self-motivate supports the optimal execution of tasks.
PHC3	The ability to adapt to organizational changes supports smooth work operations.
PHC4	Special training related to specific jobs is received periodically.
PHC5	Experience and expertise in the field support task execution effectiveness.
PHC6	The ability to work in teams supports the achievement of organizational goals.
PHC7	Good communication skills facilitate coordination with colleagues, subordinates, and superiors.
PHC8	Strong leadership abilities encourage the achievement of organizational goals.
PHC9	A sufficient number of employees supports the achievement of the organization's key performance targets.
PHC10	Clear roles and functions contribute to achieving the organization's key performance targets.

Table 2. Public Human Capital Indicators

Code	Statement Item
PSC1	The organizational culture encourages employees to work professionally.
PSC2	The organizational culture increases employee motivation at work.
PSC3	The organizational culture supports employees in maintaining high integrity in their work.
PSC4	The organizational structure aligns with the available work capacity.
PSC5	The organizational structure facilitates coordination within departments effectively.
PSC6	The organizational structure enables effective inter-departmental coordination.
PSC7	The work environment supports continuous learning, both formally and informally.
PSC8	The work environment routinely holds discussions to resolve work-related problems, both formally and informally.
PSC9	The work environment regularly engages in scientific discussions about the organization's field.
PSC10	Current procedures and processes support the development of employee competencies.
PSC11	The organization's strategic vision and mission are reflected in the execution of tasks.
PSC12	The applicable Standard Operating Procedures (SOPs) effectively complete departmental tasks.
PSC13	The applicable SOPs are effective in providing services to stakeholders.
PSC14	Leadership changes or transfers affect departmental processes and work programs.
PSC15	Leadership oversight contributes to achieving the organization's key performance targets.

Table 3. Public Structural Capital Indicators

Code	Statement Item
PRC1	The organization has the ability to collaborate with other units or organizations within the internal environment.
PRC2	The organization has the ability to collaborate with external agencies or organizations.
PRC3	The organization's leaders are well-known to the public.
PRC4	The public responds positively to the organization's leaders.
PRC5	The organization maintains a good image in the media.
PRC6	The organization involves the public in the planning of work programs.
PRC7	The public finds it easy to access the official website of the organization.

Table 4. Public Relational Capital Indicators

Additionally, this study introduces digital leadership as a moderating variable. Indicators of digital leadership following Chatterjee et al. (2023) are as follows:

Code	Statement Item
DL1	The organization's leaders consistently educate employees about information technology risks.
DL2	The organization's leaders always promote employee awareness about the importance of technology in improving job quality.
DL3	The organization's leaders emphasize ethical behavior in using information technology, which impacts stakeholders.
DL4	The organization's leaders consistently encourage employees to reduce resistance to technological innovations.
DL5	The organization's leaders regularly share knowledge or skills related to technology with employees.
DL6	The organization's leaders always guide employees in effectively using technology.

Table 5. Digital Leadership Indicators

This study used SmartPLS (Partial Least Squares Structural Equation Modeling) to test the hypotheses and assess the relationship between variables. SmartPLS was selected over covariance-based SEM methods such as AMOS or LISREL due to its advantages in handling complex models with latent constructs, particularly when dealing with small to medium sample sizes, non-normal data distributions, and models that include moderating or mediating effects (Hair, Hult, Ringle & Sarstedt, 2022). Moreover, PLS-SEM is especially suitable for exploratory research and theory development, making it an appropriate methodological choice for this study.

The sample size of 195 is considered sufficient, as it exceeds the commonly accepted threshold of ten times the number of indicators or the most complex path in the model (Hair et al., 2022). This number enables more accurate testing of the hypothesized relationships between public human capital, public relational capital, public structural capital, organizational performance, and the moderating effect of digital leadership. While a larger sample could further enhance the generalizability of the findings, the current sample size provides an adequate basis for meaningful and reliable conclusions within the context of the Directorate General of Taxes.

The sample size of 195 provides a solid foundation for robust results for the validity and reliability tests. With factor loadings above the 0.6 threshold, as suggested by Hulland (1999), and Cronbach's Alpha and Composite Reliability values above 0.7, the research instruments are confirmed to be reliable and valid. According to Sekaran and Bougie (2016), these reliability measures confirm that the items used in the questionnaire consistently measure their respective constructs and are suitable for further analysis. Therefore, the sample size of 195 is suitable for testing the hypotheses and conducting the necessary validity and reliability checks in this study.

4. Results and Discussions

The respondents in this study demonstrated diverse characteristics across multiple dimensions, providing valuable insights into the Directorate General of Taxes (DGT) workforce. The majority of respondents were male, totaling 157 individuals, compared to 38 females. This male dominance may reflect organizational structure or gender-based variations in career opportunities. However, the presence of female respondents highlights their significant roles within the organization. Further analysis could explore differences in workplace experiences and perceptions between genders.

Account representatives formed the largest group of respondents (74), followed by 43 section heads of supervision and 31 tax auditors. Other roles included 16 section heads of examination, valuation, and collection (P3), 16 tax counselors, 12 tax bailiffs, and 3 appraisers. This distribution underscores the variety of responsibilities and roles within the organization, which may shape individual perspectives and contributions.

The majority of respondents held a bachelor's degree, totaling 106 individuals, followed by 63 with a master's degree and 20 with a diploma. A small group of 6 respondents had completed high school. It indicates a relatively high level of education, which likely influences organizational capacity and career development opportunities. Most respondents came from management (78), followed by accounting (59) and economics (27). Other fields included law (6), administration (4), and 21 from miscellaneous disciplines. This diversity in academic backgrounds contributes to varied approaches to tasks and challenges at work, with accounting professionals potentially offering specialized financial expertise.

The respondents' tenure varied, with 94 having over 20 years of experience, 61 with 11-20 years, 39 with 6-10 years, and 1 with 3–5 years. This distribution reflects a mix of seasoned and newer employees, which could influence adaptability and productivity across the organization. Respondents were distributed across three Regional DGT Offices: East Java III (89 respondents), Central Java II (77 respondents), and South Jakarta II (29 respondents). This representation highlights the study's effort to capture geographical and operational diversity within the DGT, providing a broader perspective on organizational dynamics.

The validity test results demonstrate that the variables used in this research are valid, as indicated by their factor loadings. The criterion for validity employed in this study is a factor loading greater than 0.6, as suggested by Hulland (1999). The findings show that the indicators for each variable meet this threshold, confirming their validity. Specifically, digital leadership (DL) has factor loadings ranging from 0.816 to 0.911, indicating strong item validity across its indicators. Organizational performance (OP) has valid items with factor loadings between 0.63 and 0.86. Public human capital (PHC) displays factor loadings ranging from 0.683 to 0.836, affirming the validity of its indicators. Public structural capital (PSC) shows the highest range of factor loadings from 0.679 to 0.887, while public relational capital (PRC) exhibits loadings from 0.69 to 0.823. Two questionnaire items, PSC14 and PRC6, were excluded from further analysis as they did not meet the validity criteria.

The reliability test results indicate that all latent variables in this research are reliable. This conclusion is based on Cronbach's Alpha and Composite Reliability values above 0.7 and the Average Variance Extracted (AVE) values exceeding 0.5. Digital leadership (DL) achieves a Cronbach's Alpha of 0.944, a rho_A of 0.947, and a Composite Reliability of 0.956, with an AVE of 0.783, confirming its strong reliability. Organizational performance (OP) shows reliability with a Cronbach's Alpha of 0.915 and Composite Reliability of 0.929, while its AVE is 0.568, supporting its adequacy. Public human capital (PHC) also shows high reliability with a Cronbach's Alpha of 0.919, a Composite Reliability of 0.933, and an AVE of 0.581. Public relational capital (PRC) has a Cronbach's Alpha of 0.852, indicating solid reliability, supported by Composite Reliability of 0.89 and an AVE of 0.574. Finally, public structural capital (PSC) exhibits the highest reliability measures with a Cronbach's Alpha of 0.958, a Composite Reliability of 0.963, and an AVE of 0.649. These findings confirm that all variables are reliable and suitable for further analysis.

Following these tests for validity and reliability, the next step is to present the descriptive statistics for the variables measured in this study. The table below provides an overview of the mean, median, mode, standard deviation, minimum, and maximum values for each variable, reflecting the general distribution and consistency of the responses gathered from the participants.

Variable	Mean	Median	Mode	Std. Dev.	Min.	Max.	Obs.
OP	5.427	5.5	6	0.508	3.9	6	195
PHC	5.492	5.6	6	0.496	3.6	6	195
PSC	5.472	5.643	6	0.535	3.429	6	195
PRC	5.248	5.333	6	0.624	2.667	6	195
DL	5.526	5.833	6	0.562	3.5	6	195

Table 6. Descriptive Statistics

Based on the descriptive statistics in the table above, it can be concluded that the measured variables, namely Organizational Performance (OP), Public Human Capital (PHC), Public Structural Capital (PSC), Public Relational Capital (PRC), and Digital Leadership (DL), received relatively high ratings from the respondents. The average scores for each variable range from 5.25 to 5.53, indicating that the majority of respondents provided positive assessments of the factors associated with these variables. The dominant mode for all variables is 6, which suggests that many respondents gave the highest ratings for each measured variable.

However, despite the majority of ratings falling within a high range, there is variation in the assessments, as reflected by the standard deviations ranging from 0.496 to 0.624. It indicates differences in opinion among respondents, although most provided relatively high ratings. The minimum and maximum values for each variable also show some differences in ratings, with some respondents giving lower scores. Overall, the data

reflects a positive perception of organizational performance and related factors, although there is variation in the evaluations.

The hypothesis test results are presented in Table 1, which summarizes the findings regarding the relationships between the independent variables and organizational performance (OP) and the moderating role of digital leadership (DL). The table includes coefficient values, t-statistics, probabilities, and R-squared values, offering a comprehensive overview of each tested relationship's statistical significance and strength. The following analysis highlights the direct and moderating effects of public human capital (PHC), public relational capital (PRC), and public structural capital (PSC) on organizational performance, along with the impact of digital leadership.

	Coeff.	t-Stat.	Prob.	R2	Adj. R2
DL -> OP	0.167	1.948	0.026	0.748	0.739
PHC -> OP	0.201	2.354	0.009		
PHC*DL -> OP	0.033	0.543	0.294		
PRC -> OP	0.193	2.513	0.006		
PRC*DL -> OP	0.035	0.488	0.313		
PSC -> OP	0.453	3.891	0.000		
PSC*DL -> OP	0.034	0.345	0.365		

Table 7. Summary of Hypothesis Test Results

4.1. The Effect of Public Human Capital on DGT's Organizational Performance

The hypothesis test suggests that public human capital positively affects the DGT organizational performance. The resource-based view (RBV) identifies public human capital, encompassing the knowledge, skills, and competencies of DGT employees, as a resource that is difficult to replicate and key to achieving a competitive advantage. At DGT, skilled and motivated employees play a vital role in achieving organizational goals, especially in adapting to evolving tax regulations. In line with the new stakeholder theory (Neckebrouck & Kryscynski, 2024), public human capital is an essential part of the nexus of contracts, where the DGT's employees, as internal stakeholders, contribute to value creation and organizational success. The theory emphasizes that the value created through human capital must be shared and aligned with both internal and external stakeholders, fostering sustainable and mutually beneficial relationships.

Qiu, Holmen, Havenvid, De Boer and Hermundsdottir (2022) stress that an organization's ability to adapt to regulatory and technological changes is critical for sustaining its competitive edge. Well-managed public human capital at DGT ensures quick and efficient responses to these changes, maintaining the organization's relevance and effectiveness in implementing new regulations and leveraging technology in tax administration. New stakeholder theory highlights that the relationship between employees and other stakeholders (e.g., taxpayers and policymakers) creates a collaborative environment where internal capabilities and external expectations are met, driving the organization's competitive advantage. D'Oria, Crook, Ketchen, Sirmon and Wright (2021) highlight that combining resources, including human capital, technology, and efficient processes, generates more value than using them separately. At DGT, integrating employee expertise with tax technology helps meet revenue targets and improves taxpayer service quality, showing the importance of managing public human capital effectively for strategic success.

Data aligns with Alqudah, Carballo-Penela and Ruzo-Sanmartín (2022), showing DGT employees' high commitment and motivation, contributing to effective job performance. While motivation among employees supports innovation and problem-solving, this research underscores the need for targeted training. Mustafa and Lleshi (2024) assert that continuous training is essential for enhancing skills to manage regulatory and technological changes effectively. Such focused training ensures that employees remain capable and prepared for ongoing challenges. Zhenjing, Chupradit, Ku, Nassani and Haffar (2022) note that motivated employees create a productive environment. Valued employees who see growth opportunities show higher motivation, positively impacting performance. New stakeholder theory further emphasizes the importance of employee development for creating long-term value for the organization and the external stakeholders. Motivated employees contribute

to stronger relationships with taxpayers and policymakers, increasing trust and support for the DGT's operations.

Dewabrata et al. (2022) also confirm that public human capital significantly affects public sector performance, with skilled and motivated DGT employees boosting tax compliance and oversight. It contrasts with Ednoer et al. (2022), who found no significant effect of public human capital on performance. In DGT, public human capital directly supports achieving organizational goals, as competent and motivated employees are pivotal for meeting revenue targets and providing quality taxpayer services. Freeman (1984) and Freeman et al. (2021) state that organizations have obligations toward various stakeholders, including employees, the public, and policymakers. For DGT, managing human capital well boosts internal efficiency and enhances relationships with external stakeholders. New stakeholder theory highlights that internal resources like human capital can be leveraged to strengthen the relationships between the DGT and its external stakeholders, such as taxpayers and government bodies, creating value for all involved. Freeman et al. (2021) suggest that well-managed human capital fosters better external relationships, increasing trust and support for the organization. Rockwell (2019) underscores the importance of stakeholder collaboration for successful policy implementation in the public sector, where interaction among employees, the public, and government ensures policy sustainability and service quality. For DGT, strong human capital coupled with effective stakeholder interaction fosters synergy, boosting tax service quality and helping meet revenue targets.

Harrison, Freeman and de Abreu (2015) emphasize that stakeholder engagement in decision-making provides organizations greater adaptability to external changes. For DGT, strong relationships with stakeholders, such as policymakers and taxpayers, support the implementation of new tax policies and improve compliance with regulations. This research affirms that public human capital is fundamental for DGT's performance from both RBV and stakeholder theory perspectives. Proper human capital management through continuous training, motivation, and stakeholder engagement helps DGT sustain competitive advantage and enhance performance. New stakeholder theory reinforces this by showing that the involvement of both internal and external stakeholders in value creation drives organizational success. Investing in employee development and reinforcing stakeholder relationships enables DGT to achieve strategic goals and create more value for the organization and the wider community.

4.2. The Effect of Public Structural Capital on DGT's Organizational Performance

The hypothesis test result confirms that public structural capital positively affects the DGT organizational performance. The resource-based view (RBV) identifies valuable, rare, difficult-to-imitate, and non-substitutable resources as keys to competitive advantage (Barney, 1991). At DGT, public structural capital, IT infrastructure, standard operating procedures (SOPs), and data management systems are strategic resources supporting operational efficiency and effectiveness. New stakeholder theory (Neckebrouck & Kryscynski, 2024) complements this perspective by viewing organizations as a nexus of contracts, where public structural capital is a resource shared and utilized by both internal stakeholders (employees) and external stakeholders (taxpayers and government bodies). Well-maintained structural capital enables DGT to effectively manage stakeholder relationships, creating value for all involved. The efficient use of public structural capital enhances internal efficiency and strengthens relationships with external stakeholders, contributing to long-term organizational success.

Qiu et al. (2022) emphasize the importance of dynamic capabilities for organizations to continuously adapt their resources in response to external changes. Well-integrated business processes and effective internal control systems allow DGT to respond swiftly to regulatory or technological shifts, bolstering internal performance and maintaining a competitive advantage. New stakeholder theory highlights the importance of maintaining robust relationships with stakeholders, such as taxpayers, to ensure that organizational resources, like structural capital, are effectively utilized to meet stakeholder needs. Survey data highlights that strong interdepartmental coordination at DGT contributes significantly to operational efficiency and reinforces the organization's structure.

Gogan, Duran and Draghici (2015) note that an organizational culture promoting professionalism, integrity, and collaboration is vital to public structural capital. Respondents in the survey rated DGT's culture of

professionalism and integrity positively, indicating its substantial role in enhancing performance. Also, Gogan et al. (2015) add that a clear organizational structure ensures employees understand their roles and responsibilities, aligning with survey findings that show respondents believe DGT's structure suits their work needs. New stakeholder theory supports this by emphasizing that well-structured internal systems are critical for creating value for internal and external stakeholders (employees) (taxpayers, and policymakers), fostering efficient collaboration, and meeting expectations. Freeman (1984) underlines the importance of an organization's relationship with internal and external stakeholders. For DGT, public structural capital supports these relationships by facilitating transparent and accountable tax services. Freeman et al. (2021) highlight that efficient structures and well-managed systems enhance the organization's effectiveness in meeting stakeholder expectations, as reflected in survey responses that favorably rate job coordination.

However, Ednoer et al. (2022) caution that rigid structures can hinder innovation if they do not adapt to change. Continuous updates and system adaptations are necessary for DGT to remain responsive to new regulations and external challenges. Variability in perceptions regarding the effectiveness of SOPs in stakeholder services indicates potential for improvement. An organizational culture that encourages continuous learning is crucial, with most survey respondents positively rating DGT's work environment for learning. Mehralian, Farzaneh, Yousefi and Haloub (2024) stress that a culture fostering innovation and high performance supports ongoing competency enhancement, enabling DGT to achieve its goals. Rockwell (2019) highlights the role of stakeholder collaboration in public sector efficiency, suggesting that a collaborative culture at DGT strengthens interactions with external stakeholders and service quality.

Harrison et al. (2015) add that stakeholder involvement in decision-making promotes organizational flexibility and responsiveness. DGT's systems for data management and structured procedures enable timely, accurate decision-making. Survey results also indicate that respondents feel supported by job processes that promote competency development, although some variability points to opportunities for further improvement. New stakeholder theory reinforces that well-managed systems and employee involvement in decision-making enhance the organization's ability to respond to internal and external demands, creating value for all stakeholders. Dewabrata et al. (2022) emphasize the role of public structural capital in government agency efficiency, which at DGT translates to better expenditure management and positive organizational outcomes. High ratings for leadership oversight in meeting targets further reflect the alignment between structural capital and performance at DGT.

RBV underscores that public structural capital maximizes other resources, such as human and relational capital, contributing to overall performance. Efficient infrastructure and integrated systems allow DGT to operate effectively, while an innovation-driven culture supports adaptation to external changes. From the stakeholder theory perspective, DGT's structural capital strengthens stakeholder relationships by facilitating communication and transparency in taxpayer services, enhancing trust and satisfaction. According to RBV, well-maintained public structural capital offers a competitive edge that is hard to replicate, particularly through advanced technology and system integration. DGT's ability to continuously adapt its structural capital demonstrates strong dynamic capabilities, ensuring responsive and efficient operations. New stakeholder theory highlights that structural capital benefits all stakeholders when effectively utilized, creating a more inclusive, sustainable approach to public service. DGT can deliver high-quality taxpayer services through efficient systems and processes, manage risks, and adhere to regulatory standards. This structural strength supports DGT's flexibility and adaptability, promoting sustainability and long-term success.

4.3. The Effect of Public Relational Capital on DGT's Organizational Performance

The hypothesis test confirms that public relational capital positively affects DGT's organizational performance. According to Barney (1991), public relational capital is a valuable, hard-to-replicate resource that grants organizations a sustainable competitive edge. Strong stakeholder relationships with taxpayers, the government, and the public are crucial for maintaining and enhancing DGT's performance. New stakeholder theory (Neckebrouck & Kryscynski, 2024) further supports this view, as it positions organizations as a nexus of contracts, emphasizing the importance of effective stakeholder engagement. In DGT's context, relational capital, built on strong relationships with external stakeholders, is a strategic resource that helps create value for both

internal and external parties. The more effectively DGT manages these relationships, the more it can leverage them to strengthen its organizational performance.

Huang and Xiao (2023) highlight that leveraging public relational capital effectively can enable organizations like DGT to respond better to external changes, such as regulatory updates or economic shifts. This adaptability allows DGT to adjust strategies swiftly, supporting operational resilience and improved performance. Freeman (1984), through stakeholder theory, underscores that organizations must be accountable not only to shareholders but to all stakeholders, including employees and the public. For DGT, engaging external stakeholders through public relational capital is key to building robust support for its tax administration roles. Freeman et al. (2021) further emphasize that maintaining strong stakeholder relationships enhances an organization's ability to build trust, gain cooperation, and meet its goals–particularly in environments subject to change, such as the tax sector. DGT's relationships with taxpayers and other external stakeholders are central to fostering compliance and improving tax collection efficiency.

Effective communication forms a core part of public relational capital. Schnackenberg and Tomlinson (2016) state that transparent communication with taxpayers helps reduce misunderstandings and fosters compliance. Dewabrata et al. (2022) further emphasize that collaboration with government and private sectors can boost oversight and regulatory enforcement efficiency. Social capital theory underscores that well-maintained relationships and stakeholder trust are key drivers of cooperation and efficiency. Survey data indicates that while DGT's efforts to meet tax targets are strong, perceptions of external collaboration vary, suggesting room for improvement in building relationships with external stakeholders.

Ednoer et al. (2022) caution that poorly managed public relational capital may fail to impact performance significantly. Variability in responses regarding cooperation with external stakeholders and leadership perception points to challenges that DGT must address to optimize its relational capital. New stakeholder theory reinforces that organizations must manage relationships effectively across internal and external stakeholders to create a balanced and sustainable value distribution. Public relational capital also enhances DGT's reputation. Cardoso, Gabriel, Figueiredo, Oliveira, Rêgo, Silva et al. (2022) argue that a positive reputation simplifies gaining public support. Additionally, strong relationships mitigate conflicts and facilitate efficient dispute resolution. Zhang and Wang (2018) show that well-maintained stakeholder relationships help resolve issues constructively, aiding smoother operations and better taxpayer satisfaction.

Rockwell (2019) stresses the importance of stakeholder collaboration in public sector success. Effective partnerships with the public, government bodies, and media can synergize efforts that enhance DGT's organizational performance. Access to external resources, like technology and insights, further boosts effectiveness and operational efficiency. Harrison et al. (2015) add that robust stakeholder engagement allows organizations greater flexibility in navigating external changes, which is crucial for DGT when dealing with regulatory shifts or global economic challenges. Social capital theory also highlights that the strength of stakeholder networks and social ties facilitates effective decision-making and collaboration, contributing to greater organizational performance.

Strong stakeholder relations help DGT respond efficiently, supporting its long-term sustainability. Overall, well-managed public relational capital benefits DGT by boosting compliance, refining processes, and strengthening public services. It supports internal performance and external stakeholder relations, enhancing public trust and operational legitimacy. From the RBV perspective, relational capital is a strategic asset that equips DGT with a competitive advantage, enabling quick and effective responses to change, thus ensuring organizational success and future sustainability. New stakeholder theory further emphasizes that DGT's success relies on balancing internal efficiency with external relationships, making it crucial to strategically manage relational capital to sustain long-term value for all stakeholders involved.

4.4. The Effect of Digital Leadership on the Performance of DGT's Organizational Performance

Hypothesis testing indicates that digital leadership positively affects DGT's organizational performance. Tagscherer and Carbon (2023) explain that effective digital leadership drives the adoption of advanced technologies such as e-filing, e-billing, and data analytics, which enhance the efficiency and accuracy of tax

management. These digital implementations streamline workflows and minimize manual errors, directly contributing to improved organizational performance. Digital leadership emphasizes technology adoption and leverages it for more informed decision-making. Chatterjee and Sreenivasulu (2019) note that digital leadership enhances data usage and analytics for better decision support. DGT's use of big data to identify trends, patterns, and anomalies has strengthened tax supervision and boosted collection efficiency.

Tigre et al. (2023) highlight that digital leadership fosters a culture of innovation, reflected in DGT's proactive efforts to reduce resistance to technological change and upskill employees. It ensures ongoing technological adoption that aligns with operational goals. Müller et al. (2024) stress that digital leadership facilitates faster and more effective digital transformation, improving internal processes and taxpayer services, thus raising compliance and satisfaction levels. Yao et al. (2024) highlight the importance of coordination and consensus in digital leadership implementation. DGT's use of digital platforms enhances internal communication and collaboration, streamlining operations and aligning strategies across organizational units.

In the context of the unified theory of acceptance and use of technology (UTAUT), the adoption of digital tools and systems at DGT can be understood through its key constructs. According to UTAUT, performance and effort expectancy are crucial determinants of technology adoption. DGT employees' perception that e-filing, e-billing, and other digital systems will improve their efficiency and ease of use influences their willingness to embrace these tools. Social influence also plays a significant role, as employees and stakeholders, such as taxpayers, may be more likely to adopt these technologies if they observe others benefiting from them. Facilitating conditions, such as training and adequate support, are also essential in ensuring that employees and stakeholders can effectively use these technologies.

In the resource-based view (RBV) framework outlined by Barney (1991), digital technology adopted through digital leadership is a strategic resource, giving DGT a competitive edge. This technology boosts operational efficiency, reduces costs, and streamlines tax processes, enhancing overall performance. Regarding stakeholder theory, digital leadership strengthens relationships between DGT and stakeholders, such as taxpayers. Implementing digital technology enhances transparency and accountability, builds public trust, and increases compliance. Rockwell (2019) supports this, emphasizing that effective digital leadership should prioritize collaboration through technological integration, improving stakeholder relations and organizational outcomes. Harrison et al. (2015) further stress that digital technology facilitating stakeholder engagement enables responsive decision-making. At DGT, leveraging digital tools for communication and information sharing accelerates decision-making, enhancing overall performance.

4.5. The Moderating Role of Digital Leadership on the Effect of Public Human Capital on DGT's Organizational Performance

The hypothesis testing result reveals that digital leadership does not amplify the positive influence of public human capital on DGT organizational performance. Public human capital, encompassing the knowledge, skills, and competencies of DGT employees, already plays a crucial role in achieving organizational goals. However, its impact on enhancing performance is limited without the comprehensive support of digital leadership integration. Barney (1991), in the resource-based view (RBV), underscores that human capital is a unique and valuable resource essential for competitive advantage, but its potential can only be fully realized when paired with well-integrated digital leadership and technology. New stakeholder theory (Neckebrouck & Kryscynski, 2024) complements this, emphasizing the need for organizations to effectively engage both internal stakeholders (employees) and external stakeholders (taxpayers, government bodies) to utilize human capital fully. For DGT, this engagement is critical to overcoming barriers and ensuring that human capital and digital leadership are aligned for optimal performance.

Gogan et al. (2015) highlight that public structural capital is vital for supporting organizational performance, particularly in technology management and infrastructure. At DGT, uneven infrastructure and limited training in technology present challenges that inhibit the full potential of digital leadership in enhancing human capital. Public structural capital, which includes standard procedures and data management systems, facilitates technological utilization. However, as reflected in descriptive statistical data, limited employee training constrains optimal technology use and digital innovation in the organization. UTAUT highlights that effort and

performance expectancy are key factors influencing technology adoption, and facilitating conditions such as adequate training is critical for the effective use of digital tools. DGT's lack of sufficient training and support limits the positive impact of technology on human capital.

Müller et al. (2024) point out that digital leadership requires a blend of technical, business, and people-focused competencies. In DGT's context, the main challenge lies in partially implementing these competencies. Although DGT leaders have promoted technology usage by educating employees on risks and emphasizing its significance, employee resistance persists. It suggests that digital leadership must go beyond promoting technology adoption and actively engage employees to overcome resistance (Yao et al., 2024). Chatterjee et al. (2023) state that successful digital leadership hinges on technology adoption and creating a collaborative digital workplace. While most DGT employees acknowledge leadership support for technology, significant resistance to innovation remains, echoing Chatterjee et al. (2023) view that digital leadership should foster an environment that promotes digital collaboration and employee engagement at all levels.

From a stakeholder theory perspective, DGT leaders must engage employees as internal stakeholders in digital initiatives. Without this involvement, resistance to change will increase. Freeman et al. (2021) stress that effective digitalization requires balancing technology adoption with internal and external stakeholder engagement. Tigre et al. (2023) argue that digital leadership must integrate technology, innovation, and human capabilities within the organization. Despite DGT's efforts to guide technology use, data indicate that public human capital's full potential is constrained by insufficient infrastructure and resistance to technological change. Limited training and inflexible organizational structures further inhibit the maximization of public human capital. Thus, while DGT's public human capital is strong and contributes to performance, challenges remain in implementing digital leadership. Resistance to technology, inadequate training, and structural limitations restrict its impact. Barney (1991) in RBV highlights that integrating technology with human capital is crucial for competitive advantage. UTAUT emphasizes that facilitating conditions (such as training and system readiness) are key for improving technology adoption. Digital leadership's influence on organizational performance will be limited without this integration and sufficient structural support.

4.6. The Moderating Role of Digital Leadership on the Influence of Public Structural Capital on DGT's Organizational Performance

The finding reveals that digital leadership does not enhance the positive impact of public structural capital on DGT's organizational performance due to ineffective integration between technology and existing structures. Tagscherer and Carbon (2023) emphasize that while digital leadership can drive technological efficiency and innovation, its benefits are limited if not aligned with the organizational framework. New stakeholder theory (Neckebrouck & Kryscynski, 2024) supports this by highlighting that organizations must balance internal and external stakeholder interests. For DGT, this means engaging employees and taxpayers effectively to align technological advancements with structural improvements. Digital technology supports structural capital elements, such as faster communication and improved information flow. However, Chatterjee and Kar (2018) and Chatterjee and Sreenivasulu (2019) argue that more profound organizational components, like culture, management practices, and work procedures, require more than technology adoption. DGT's focus on technological innovation may overlook fostering an organizational culture reinforcing structural capital, limiting the technology's impact on performance.

Wynen, Boon, Kleizen and Verhoest (2020) point out that public sector structures often resist change, which can restrict digital leadership's effectiveness in strengthening structural capital, an issue pertinent to DGT, where integrating digital processes with existing structures faces challenges. Tigre et al. (2023) emphasize that digital leadership must integrate with current organizational systems for success, with leaders adapting technology to fit these structures. Müller et al. (2024) note that effective digital leadership requires full organizational commitment. At DGT, despite adopting digital technology, support from all levels may be insufficient, hindering its seamless integration into the structure. Yao et al. (2024) stress that effective digital leadership depends on clear strategic consensus and handling resistance to change. Without such consensus at DGT, adopting digital technology may not translate into significant improvements in structural capital or overall performance.

In the context of UTAUT, the lack of clear consensus and resistance to change may be influenced by constructs such as effort expectancy and social influence. Effort expectancy, or the perceived ease of use of technology, plays a crucial role in employee willingness to embrace technological tools. Social influence, or the impact of peers and leaders on employees' decisions to adopt technology, also impacts how effectively digital tools are integrated within the DGT. The lack of sufficient facilitating conditions (such as adequate training and support), as highlighted in UTAUT, may be a barrier to fully leveraging digital leadership to enhance structural capital. If employees and other stakeholders do not perceive the technology as accessible and beneficial, its adoption is less likely to improve organizational performance significantly.

4.7. The Moderating Role of Digital Leadership on the Effect of Public Relational Capital on DGT's Organizational Performance

The hypothesis testing indicates that digital leadership at the DGT does not enhance the positive influence of public relational capital on organizational performance. While digital leadership focuses on technology implementation and internal efficiency, public relational capital involves complex relationships with external stakeholders, such as taxpayers, business partners, and government agencies. Tagscherer and Carbon (2023) note that while beneficial for internal processes, digital leadership has a limited impact on public relational capital if external relationships are not prioritized. New stakeholder theory (Neckebrouck & Kryscynski, 2024) emphasizes that organizations must foster relationships with both internal and external stakeholders. For DGT, this theory suggests that while digital leadership may streamline internal processes, it cannot replace the direct interaction necessary for building trust with external stakeholders, such as taxpayers and government partners.

Relational capital includes trust and interpersonal relationships with stakeholders, which Zhang and Wang (2018) argue cannot be entirely replaced by digital technology. Trust and direct communication, such as dialogues with taxpayers and collaborations with external bodies, require a personal approach. At DGT, the emphasis on technological innovation in digital leadership has not fully leveraged public relational capital, particularly in fostering key external relationships. Rockwell (2019) reinforces that while technology boosts efficiency, it cannot replace direct interactions for trust-building. In this context, social capital theory underscores that social networks, trust, and norms of reciprocity are essential for building effective external relationships (Coleman, 1988; Nahapiet & Ghoshal, 1998). In DGT's context, these elements of relational capital are vital for fostering taxpayer trust and cooperation but cannot be fully facilitated by technology alone.

Chatterjee and Kar (2018) and Chatterjee and Sreenivasulu (2019) highlight that effective digital leadership should integrate technology with employee and stakeholder engagement. DGT's digital leadership efforts face challenges due to a lack of clear strategy combining technology and interpersonal interaction. As Chatterjee and Sreenivasulu (2019) emphasize, trust and collaboration cannot be achieved solely through technology, limiting digital leadership's impact when interpersonal aspects are overlooked. It reflects the idea in Social Capital Theory that relationships and networks are not just about technology but also about the quality of interpersonal interactions and shared norms.

Tigre et al. (2023) stress that successful digital leadership integrates technology with human skills, including interpersonal capabilities. At DGT, there appears to be a misalignment between technology implementation and relational capital utilization, hindering robust stakeholder relations. Müller et al. (2024) add that digital leadership requires a mix of technical, business, and interpersonal competencies, suggesting that a tech-only focus reduces its impact on performance. UTAUT introduces key constructs, such as effort and performance expectancy, which are significant in adopting new technologies (Momani, 2020). The lack of these factors in DGT's digital leadership strategy, such as insufficient facilitating conditions (e.g., adequate training and infrastructure), contributes to the underutilization of relational capital. Employees may not fully embrace the technology if they perceive it as difficult to use or not aligned with their work goals, limiting its ability to enhance relational capital.

Yao et al. (2024) stress that effective digital strategies must involve consensus and address resistance to innovation. Despite technological advancements, DGT faces resistance to change and unclear technology roles in fostering stakeholder relationships. Data suggests that while DGT employees are committed and self-motivated, uneven training in technology and interpersonal skills hampers the optimization of digital strategies.

It echoes Chatterjee and Sreenivasulu's (2019) argument that comprehensive training is essential for successful digital leadership. It aligns with UTAUT, which emphasizes that technology adoption is influenced by effort expectancy and facilitating conditions, such as proper training and support.

In stakeholder theory, Freeman et al. (2021) argue that external relationships are vital for enhancing organizational performance. Barney's (1991) resource-based view (RBV) identifies relational capital as a valuable and hard-to-replicate resource that confers a competitive advantage. Without strategies to enhance interpersonal skills and manage stakeholder relationships, DGT cannot fully harness its relational capital. At the same time, digital technology has improved internal processes, but challenges in building external trust limit digital leadership's broader impact. It highlights the importance of integrating digital leadership with relational capital's social and interpersonal aspects, as social capital theory emphasizes, to achieve long-term organizational success.

Dewabrata et al. (2022) and Ednoer et al. (2022) emphasize that balancing technology and interpersonal relations is crucial in managing public relational capital. Without a holistic approach, technology alone cannot significantly elevate performance. Although digital leadership at DGT enhances internal efficiency, its influence on public relational capital remains constrained. Both stakeholder theory and RBV highlight the importance of integrating technology with interpersonal skills to maximize organizational performance. This integration is essential for digital leadership to enhance DGT's performance (Chatterjee & Kar, 2018; Chatterjee & Sreenivasulu, 2019).

5. Conclusion, Limitations, Implications

This study concludes that public human capital, encompassing the knowledge, skills, and competencies of DGT employees, positively impacts organizational performance by enhancing internal management and the efficiency of public service delivery. Public relational capital also contributes significantly, enabling the Directorate General of Taxes (DGT) to adapt to regulatory changes and maintain taxpayer trust through strong stakeholder engagement. Additionally, public structural capital, represented by IT infrastructure, standard operating procedures (SOPs), and data systems, emerges as a strategic asset that improves operational efficiency and institutional accountability.

Digital leadership is shown to have a direct positive influence on DGT's organizational performance by promoting technology adoption, increasing process automation, and improving responsiveness to taxpayer needs. However, digital leadership does not significantly strengthen the effects of public human capital, structural capital, or relational capital. This finding highlights several organizational challenges, including misalignment between technology and existing structures, insufficient employee training, and resistance to change. Therefore, to fully realize the benefits of digital transformation, digital leadership must be integrated with targeted interventions in organizational learning, stakeholder engagement, and structural reform.

Beyond the Indonesian context, the findings of this study offer valuable implications for other public sector organizations in developing countries that face similar challenges–such as bureaucratic inertia, limited digital literacy, and infrastructural gaps. Strategic alignment between digital leadership and intellectual capital management is essential for improving tax administration, service quality, and policy responsiveness. As developing nations increasingly pursue public sector modernization, this study provides actionable insights to guide effective and sustainable digital transformation in governance.

To enhance the effectiveness of digital leadership, the DGT should optimize its organizational structure and processes. One crucial recommendation is to prioritize training and development programs that ensure all employees, not just leaders, possess the digital skills needed to leverage technology effectively. These training initiatives should be tiered, tailored to employees' digital literacy levels, and linked with real-time operational systems to improve day-to-day performance. DGT is also encouraged to establish a structured digital leadership pipeline through mentorship and leadership competency assessments to prepare future leaders capable of managing technological change at all levels of the organization.

DGT can strengthen its public relational capital by improving communication with stakeholders, such as taxpayers, business partners, and government agencies. It can be achieved through transparent, collaborative communication and user-friendly digital tools like online portals, mobile apps, and tech-based customer service systems. Drawing from successful practices in South Korea's National Tax Service and Estonia's e-government

model (Bitton, 2022; Biz, 2025; Kriisa, 2025; Won-Seok, 2025), DGT can explore the use of real-time service dashboards, automated helpdesks, and personalized digital services to enhance taxpayer engagement and satisfaction. These practices show that digital infrastructure can significantly build trust and improve relational capital when combined with stakeholder-focused design. Moreover, similar efforts have been undertaken by developing countries such as India, which operates the Goods and Services Tax Network (GSTN) for unified digital tax administration (Gole, 2025; Sulthan, 2025); Vietnam has launched its National Digital Transformation Program focused on e-governance and digital public services (Nguyen & Nguyen, 2025; Pham, 2025); and the Philippines, where the Bureau of Internal Revenue has adopted the Electronic Filing and Payment System (eFPS) to streamline tax compliance (KPMG, 2024; PwC, 2025). These cases demonstrate that digital innovation in tax administration, when integrated with human and relational capital, can also offer strategic benefits for emerging economies facing comparable institutional challenges.

Additionally, upgrading information systems and enhancing data management capabilities should be prioritized for data-driven decision-making and integration across DGT systems. It will create a more seamless operational flow and allow for better responsiveness to taxpayer needs. DGT should also assess its organizational structure to optimize public structural capital and ensure that internal processes and procedures align with digital tools. The formation of regional digital transformation task forces is recommended to coordinate localized implementation strategies and foster peer-to-peer learning between offices with different levels of digital maturity.

Implementing comprehensive digital leadership strategies that focus on both technology adoption and strengthening intellectual capital is crucial. Encouraging collaboration between digitally literate leaders and employees will ensure that digital initiatives are implemented and supported at every organizational level, reflecting the needs and capabilities of employees. Performance indicators should be clearly defined to measure digital leadership's impact and intellectual capital's contribution to organizational success. These KPIs should be embedded into DGT's broader performance evaluation framework to ensure sustainability, creating direct accountability for digital transformation results.

The findings from DGT offer valuable insights that can be applied to other public sector organizations globally. Governments aiming to enhance service delivery and operational efficiency through technology must address the full integration of digital leadership, human capital, and relational capital. In countries with similar public sector challenges, training programs focused on digital literacy for employees, as well as fostering a culture of collaboration, could significantly enhance organizational performance. Moreover, integrating digital systems with human resources management and interpersonal relationships is critical in achieving sustained improvements. Lessons from global exemplars like South Korea and Estonia show that when digital tools are combined with strong leadership and policy coherence, public organizations can achieve significant performance improvements.

Several institutional factors affect DGT's performance, including Indonesia's organizational culture and regulatory environment. The public sector's resistance to change remains a significant barrier to adopting digital tools and strategies effectively. In other countries, institutional factors such as political will, policy coherence, and investment in public sector digital infrastructure will similarly influence the adoption of technology and the maximization of relational capital. Public institutions should align their digital transformation strategies with institutional priorities, ensuring the sustainability of reforms.

This study contributes to the development of knowledge by highlighting the crucial role of digital leadership in transforming public sector organizations. The research reveals how public human capital, public relational capital, and public structural capital interact to shape organizational performance and provides insights into the effective integration of technology and human resources. By emphasizing the importance of a comprehensive approach to leadership, technology adoption, and intellectual capital, this study offers valuable lessons for other public sector organizations aiming to enhance efficiency and responsiveness. Furthermore, the study underscores the significance of addressing institutional resistance to change, a key factor in unlocking excellence in public service and organizational performance.

This study acknowledges several limitations. The sample, while carefully chosen, may not fully represent the broader population of DGT. Although the survey included various positions within specific regional offices, the

findings might not entirely reflect experiences across all tax service offices in Indonesia, limiting generalizability. Additionally, the study is specific to the DGT, which has unique operational and structural characteristics. The impact of intellectual capital and digital leadership, though significant for DGT, may not apply similarly to other public organizations that face unique challenges and factors influencing these variables' interaction with performance. Moreover, this study does not account for external environmental changes, such as regulatory shifts, technological advances, or economic dynamics, which could significantly affect DGT's performance.

Future research should expand the sample to include employees from various regions and roles, which could yield more representative and generalizable results, offering a broader understanding of the relationship between intellectual capital and digital leadership in public organizations. It aligns with the current study's method, which uses primary data from respondents with specific characteristics. Future research should delve deeper into how digital leadership can support the development of intellectual capital, particularly in broader public sector contexts, as current findings indicate that digital leadership does not consistently align with all aspects of intellectual capital. Additionally, exploring these relationships in other public organizations would determine whether these findings are unique to DGT or applicable across the public sector. Future research may also employ longitudinal designs to examine how digital leadership evolves or explore alternative moderating variables such as organizational agility or innovation climate to further clarify its interaction with intellectual capital.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest concerning this article's research, authorship, and/or publication.

Funding

The authors received financial support from LPPM Universitas Pembangunan Nasional Veteran Jakarta to cover research expenses.

References

Adler, P.S., & Kwon, S. (2002). Social capital: prospects for a new concept. *The Academy of Management Review,* 27(1), 17-40. https://doi.org/10.2307/4134367

Alqudah, I.H.A., Carballo-Penela, A., & Ruzo-Sanmartín, E. (2022). High-performance human resource management practices and readiness for change: An integrative model including affective commitment, employees' performance, and the moderating role of hierarchy culture. *European Research on Management and Business Economics*, 28(1), 100177. https://doi.org/10.1016/j.iedeen.2021.100177

Badan Kebijakan Fiskal (2023). *Sah! APBN 2024 resmi meluncur*. Available at: https://fiskal.kemenkeu.go.id/baca/2023/09/21/4463-sah-apbn-2024-resmi-meluncur

Barney, J. (1991). Resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. https://doi.org/10.1177/014920639101700108

Basri, Y.M. (2015). Pengaruh gender, religiusitas dan sikap love of money pada persepsi etika penggelapan pajak mahasiswa akuntasi. *Jurnal Ilmiah Akuntansi Dan Bisnis*, 10(1), 45-54. Available at: https://ojs.unud.ac.id/index.php/jiab/article/view/16818

Bayraktaroglu, A.E., Calisir, F., & Baskak, M. (2019). Intellectual capital and firm performance: an extended VAIC model. *Journal of Intellectual Capital*, 20(3), 406-425. https://doi.org/10.1108/JIC-12-2017-0184

Bitton, M. (2022). *The Estonian miracle: E-Estonia and the future of digital infrastructure*. Available at: https://www.sps.nyu.edu/homepage/metaverse/metaverse-blog/the-estonian-miracle-e-estonia-and-the-future-of-digital-infrastructure.html?utm_source=chatgpt.com

Biz, C. (2025). *RaonSecure to power simplified authentication for South Korea's National Tax Service*. Available at: https://idtechwire.com/raonsecure-to-power-simplified-authentication-for-south-koreas-national-tax-service/?utm_source=chatgpt.com

Campos, E.B., Salmador, M.P., & Merino, C. (2006). Towards a model of intellectual capital in public administrations. *International Journal of Learning and Intellectual Capital*, 3(3), 214-232. https://doi.org/10.1504/IJLIC.2006.011311

Cardoso, A., Gabriel, M., Figueiredo, J., Oliveira, I., Rêgo, R., Silva, R. et al. (2022). Trust and loyalty in building the brand relationship with the customer: empirical analysis in a retail chain in Northern Brazil. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3). https://doi.org/10.3390/joitmc8030109

Chatterjee, S., Chaudhuri, R., Vrontis, D., & Giovando, G. (2023). Digital workplace and organization performance: Moderating role of digital leadership capability. *Journal of Innovation & Knowledge*, 8(1), 100334. https://doi.org/10.1016/j.jik.2023.100334

Chatterjee, S., & Kar, A.K. (2018). Regulation and governance of the Internet of Things in India. *Digital Policy, Regulation and Governance*, 20(5), 399-412. https://doi.org/10.1108/DPRG-04-2018-0017

Chatterjee, S., & Sreenivasulu, N.S. (2019). Personal data sharing and legal issues of human rights in the era of artificial intelligence: moderating effect of government regulation. *International Journal of Electronic Government Research*, 15(3), 21-36. https://doi.org/10.4018/IJEGR.2019070102

Coleman, J.S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94(1), 95-120. Available at: https://www.jstor.org/stable/2780243

D'Oria, L., Crook, T.R., Ketchen, D.J., Sirmon, D.G., & Wright, M. (2021). The evolution of resource-based inquiry: a review and meta-analytic integration of the strategic resources-actions-performance pathway. *Journal of Management*, 47(6), 1383-1429. https://doi.org/10.1177/0149206321994182

Dewabrata, C., Firmansyah, A., Andrias, D., Tarigan, R.P., & Trisnawati, E. (2022). Hubungan intellectual capital dan kinerja belanja pada instansi pemerintah. *Jurnal Pajak Dan Keuangan Negara*, 4(1S), 368-377. https://doi.org/10.31092/jpkn.v4i1S.1830

Direktorat Jenderal Pajak (2024). *Laporan Tahunan 2023: Strengthening strategy, boosting performance*. Available at: https://www.pajak.go.id/id/laporan-tahunan-2023

Dzenopoljac, A., Dzenopoljac, V., Muhammed, S., Abidi, O., & Kraus, S. (2024). Intra-organizational knowledge sharing, ambidexterity and firm performance: evaluating the role of knowledge quality. *Journal of Knowledge Management*, 28(11), 132-155. https://doi.org/10.1108/JKM-06-2023-0533

Ednoer, E.H., Enita, F.D., & Firmansyah, A. (2022). Kinerja organisasi pada instansi pemerintah: bagaimana peran dari capital intellectual? *Jurnal Riset Akuntansi & Komputerisasi Akuntansi*, 13(2), 50-67. https://doi.org/10.33558/jrak.v13i1.3216

Edvinsson, L. (1997). Developing intellectual capital at Skandia. *Long Range Planning*, 30(3), 366-373. https://doi.org/10.1016/s0024-6301(97)00016-2

Fauzi, I., & Firmansyah, A. (2023). Corporate social responsibility disclosure, intellectual capital disclosure, risk disclosure, cost of capital: moderating role of earnings management Management. *Accounting Analysis Journal*, 12(1), 50-70. https://doi.org/10.15294/aaj.v12i1.66185

Freeman, R.E. (1984). *Strategic management: a stakeholder approach*. Boston: Pitman.

Freeman, R.E., Dmytriyev, S.D., & Phillips, R.A. (2021). Stakeholder theory and the resource-based view of the firm. *Journal of Management*, 47(7), 1757-1770. https://doi.org/10.1177/0149206321993576

Gilli, K., Lettner, N., & Guettel, W. (2024). The future of leadership: new digital skills or old analog virtues? *Journal of Business Strategy*, 45(1), 10-16. https://doi.org/10.1108/JBS-06-2022-0093

Gogan, L.M., Duran, D.C., & Draghici, A. (2015). Structural capital - a proposed measurement model. *Procedia Economics and Finance*, 23, 1139-1146. https://doi.org/10.1016/s2212-5671(15)00503-1

Gole, A. (2025). *Input tax credits may only be claimed via ISD*. Available at: https://www.vatcalc.com/india/india-gst-input-tax-credit-reform-apr-2025/

Habib, A.M., & Dalwai, T. (2023). Does the efficiency of a firm's intellectual capital and working capital management affect its performance? *Journal of the Knowledge Economy*, 1-37. https://doi.org/10.1007/s13132-023-01138-7

Hair, J.F., Hult, G.T.M., Ringle, C.M., & Sarstedt, M. (2022). *A Primer on partial least squares structural equation Modeling (PLS-SEM)*. Sage Publication.

Harrison, J.S., Freeman, R.E., & de Abreu, M.C.S. (2015). Stakeholder theory as an ethical approach to effective management: Applying the theory to multiple contexts. *Revista Brasileira de Gestao de Negocios*, 17(55), 858-869. https://doi.org/10.7819/rbgn.v17i55.2647

Huang, Z., & Xiao, Z. (2023). Dynamic capabilities, environmental management capabilities, stakeholder pressure and eco-innovation of Chinese manufacturing firms: a moderated mediation model. *Sustainability*, 15(9), 1-22. https://doi.org/10.3390/su15097571

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies. *Strategic Management Journal*, 20(195-204). https://doi.org/10.1002/(SICI)1097-0266(199902)20:2%3C195::AID-SMJ13%3E3.0.CO;2-7

Indrawati, L., & Sembiring, E.E. (2019). Pengaruh intellectual capital terhadap produktivitas kinerja pegawai di pemerintah daerah. *Ekspansi: Jurnal Ekonomi, Keuangan, Perbankan Dan Akuntansi*, 11(2), 223-230. https://doi.org/10.35313/ekspansi.v11i2.1559

Janošević, S., Dženopoljac, V., & Bontis, N. (2013). Intellectual capital and financial performance in Serbia. *Knowledge and Process Management*, 20(1), 1-11. https://doi.org/10.1002/kpm.1404

KPMG (2024). *Philippines: Year-end tax compliance reminders*. Available at: https://kpmg.com/us/en/taxnewsflash/news/2024/01/tnf-philippines-year-end-tax-compliance-reminders.html

Kriisa, K. (2025). *Estonia: 100% digital government services, with divorce as the final step*. Available at: https://e-estonia.com/estonia-100-digital-government-services/?utm_source=chatgpt.com

Kuralová, K., & Margarisová, K. (2016). Intellectual capital disclosure at Czech Public Universities in relation to the stakeholder information need. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 64(6), 1989-1998. https://doi.org/10.11118/actaun201664061989

Kurniawan, I.S. (2023). Dampak kinerja keuangan dalam memediasi hubungan intellectual capital terhadap nilai pasar perusahaan. *Inovasi: Jurnal Ekonomi, Keuangan Dan Manajemen*, 19(1), 178-188. https://doi.org/10.30872/jinv.v19i1.12367

Mahmood, T., & Mubarik, M.S. (2020). Balancing innovation and exploitation in the fourth industrial revolution: Role of intellectual capital and technology absorptive capacity. *Technological Forecasting and Social Change*, 160(August), 120248. https://doi.org/10.1016/j.techfore.2020.120248

Massaro, M., Dumay, J., Garlatti, A., & Dal Mas, F. (2018). Practitioners' views on intellectual capital and sustainability: From a performance-based to a worth-based perspective. *Journal of Intellectual Capital*, 19(2), 367-386. https://doi.org/10.1108/JIC-02-2017-0033

Matos, F., Vairinhos, V., & Matos, A.J. (2018). Intellectual capital management and trust in public administration in European countries. In *Managing Public Trust* (273-289). https://doi.org/10.1007/978-3-319-70485-2_17

Mehralian, G., Farzaneh, M., Yousefi, N., & Haloub, R. (2024). Driving new product development performance: Intellectual capital antecedents and the moderating role of innovation culture. *Journal of Innovation and Knowledge*, 9(3). https://doi.org/10.1016/j.jik.2024.100503

Melo, N.A.P., Verástegui, J.L., & Herrera, M.A. (2021). Relación del capital intelectual y el desempeño en la administración pública: el caso de una auditoría estatal. *Cuadernos de Administración,* 34, 1-16. https://doi.org/10.11144/Javeriana.cao34.rcidap

Metana, A.O., & Meiranto, W. (2023). Pengaruh enterprise risk management disclosure dan intellectual capital terhadap nilai perusahaan (studi empiris pada perusahaan keuangan sub sektor perbankan yang terdaftar di

Bursa Efek Indonesia tahun 2017-2020). *Diponegoro Journal of Accounting*, 12(1), 1-13. Available at: http://ejournal-s1.undip.ac.id/index.php/accounting

Momani, A.M. (2020). The unified theory of acceptance and use of technology: A new approach in technology acceptance. *International Journal of Sociotechnology and Knowledge Development*, 12(3), 79-98. https://doi.org/10.4018/IJSKD.2020070105

Morariu, C.M. (2014). Intellectual capital performance in the case of Romanian public companies. *Journal of Intellectual Capital*, 15(1), 392-410.

Müller, S.D., Konzag, H., Nielsen, J.A., & Sandholt, H.B. (2024). Digital transformation leadership competencies: A contingency approach. *International Journal of Information Management*, 75. https://doi.org/10.1016/j.ijinfomgt.2023.102734

Mursyidah, F., & Saleh, S.A. (2023). Pengaruh modal intelektual, struktur modal, ukuran perusahaan, dan umur perusahaan terhadap kinerja keuangan perusahaan industri produk makanan pertanian. *Soedirman Accounting Review*, 8(2), 146-161. https://doi.org/10.32424/1.sar.2023.8.2.9006

Mustafa, B., & Lleshi, S. (2024). The impact of lifelong learning and investments in employee development on employee productivity and performance. *Multidisciplinary Reviews*, 7(8). https://doi.org/10.31893/multirev.2024175

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *The Academy of Management Review*, 23(2), 242-266. https://doi.org/10.2307/259373

Neckebrouck, J., & Kryscynski, D. (2024). Empirically exploring the veracity of the new stakeholder perspective in strategy: Documenting workforce rents. *Strategic Management Journal*, 45(10), 2159-2188. https://doi.org/10.1002/smj.3612

Nguyen, T.A.T., & Nguyen, H.T.T. (2025). *Vietnam's national digital transformation: Key legal developments to expect in 2025*. Available at: https://www.tilleke.com/insights/vietnams-national-digital-transformation-key-legal-developments-to-expect-in-2025/

Nicolò, G., Raimo, N., Polcini, P.T., & Vitolla, F. (2021). Unveiling the link between performance and Intellectual Capital disclosure in the context of Italian Public universities. *Evaluation and Program Planning*, 88. https://doi.org/10.1016/j.evalprogplan.2021.101969

Osinski, M., Selig, P.M., Matos, F., & Roman, D.J. (2017). Methods of evaluation of intangible assets and intellectual capital. *Journal of Intellectual Capital*, 18(3), 470-485. https://doi.org/10.1108/JIC-12-2016-0138

Pham, T. (2025). *Digital transformation in Vietnam: Leading the charge into a tech-driven future*. Available at: https://www.forbes.com/councils/forbestechcouncil/2025/04/01/digital-transformation-in-vietnam-leading-the-charge-into-a-tech-driven-future/

Putri, R.S.E., & Firmansyah, A. (2022). Budgetary slack: iklim kerja etis, motivasi berprestasi, komitmen organisasi, dan modal intelektual. *Jurnal Akuntansi Dan Bisnis*, 22(1), 107-134. https://doi.org/10.20961/jab.v22i1.741

PwC (2025). *Corporate - tax administration*. Available at: https://taxsummaries.pwc.com/philippines/corporate/tax-administration

Qiu, X., Holmen, E., Havenvid, M., De Boer, L., & Hermundsdottir, F. (2022). Open for business: Towards an interactive view on dynamic capabilities. *Industrial Marketing Management*, 107, 148-160. https://doi.org/10.1016/j.indmarman.2022.09.027

Ramírez, Y., Manzaneque, M., & Priego, A.M. (2017). Formulating and elaborating a model for the measurement of intellectual capital in Spanish public universities. *International Review of Administrative Sciences*, 83(1), 149-176. https://doi.org/10.1177/0020852315575168

Ramírez, Y., Tejada, Á., & Sánchez, M.P. (2022). Determinants of online intellectual capital disclosure by Spanish local governments. *Journal of Intellectual Capital*, 23(2), 249-289. https://doi.org/10.1108/JIC-03-2020-0086

Rockwell, S. (2019). A resource-based framework for strategically managing identity. *Journal of Organizational Change Management*, 32(1), 80-102. https://doi.org/10.1108/JOCM-01-2018-0012

Sardo, F., Serrasqueiro, Z., & Alves, H. (2018). On the relationship between intellectual capital and financial performance: A panel data analysis on SME hotels. *International Journal of Hospitality Management*, 75, 67-74. https://doi.org/10.1016/j.ijhm.2018.03.001

Schnackenberg, A.K., & Tomlinson, E.C. (2016). Organizational transparency: a new perspective on managing trust in organization-stakeholder relationships. *Journal of Management*, 42(7), 1784-1810. https://doi.org/10.1177/0149206314525202

Sekaran, U., & Bougie, R. (2016). *Research methods for business: a skill-building approach* (7th ed.). Wiley.

Shin, J., Mollah, M.A., & Choi, J. (2023). Sustainability and organizational performance in South Korea: the effect of digital leadership on digital culture and employees' digital capabilities. *Sustainability (Switzerland)*, 15(3), 1-15. https://doi.org/10.3390/su15032027

Strazzullo, S., Cricelli, L., & Grimaldi, M. (2024). Intellectual capital and R&D performance improvement: The case of Italian public universities. *R and D Management*, 54(4), 852-863. https://doi.org/10.1111/radm.12548

Sulthan, A.K.A. (2025). *GST reform in India: Why your business needs to know what's coming*. Available at: https://spicylaw.com/gst-reform-in-india-what-your-business-needs-to-know/

Sun, Z., Pellegrini, M.M., Wang, C., & Yu, Z. (2021). How does government support promote firms' intellectual capital? An empirical analysis of micro-mechanisms. *Journal of Intellectual Capital*, 22(6), 1000-1029. https://doi.org/10.1108/JIC-07-2020-0260

Sydler, R., Haefliger, S., & Pruksa, R. (2014). Measuring intellectual capital with financial figures: Can we predict firm profitability? *European Management Journal*, 32(2), 244-259. https://doi.org/10.1016/j.emj.2013.01.008

Tagscherer, F., & Carbon, C.C. (2023). Leadership for successful digitalization: A literature review on companies' internal and external aspects of digitalization. *Sustainable Technology and Entrepreneurship*, 2(2), 100039. https://doi.org/10.1016/j.stae.2023.100039

Tigre, F.B., Curado, C., & Henriques, P.L. (2023). Digital leadership: a bibliometric analysis. *Journal of Leadership and Organizational Studies*, 30(1), 40-70. https://doi.org/10.1177/15480518221123132

Tjandra, I., Lindrawati, L., & Susanto, A. (2023). Pengaruh sustainability report, vitalitas, intellectual capital terhadap nilai perusahaan. *Akutansi Bisnis & Manajemen*, 30(1), 1-12. https://doi.org/10.35606/jabm.v30i1.1179

United Nations (2022). *The sustainable development goals report 2022*. Available at: https://unstats.un.org/sdgs/report/2022/

van Bakel, M., & Horak, S. (2024). Social capital theory. In *A Guide to Key Theories for Human Resource Management Research* (261-267). https://doi.org/10.4337/9781035308767.ch33

Venkatesh, V., Morris, M.G., Davis, G.B., & Davis, F.D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478. https://doi.org/10.2307/30036540

Won-Seok, J. (2025). *NTS launches free tax refund platform*. Available at: https://koreajoongangdaily.joins.com/news/2025-03-31/national/socialAffairs/NTS-launches-free-tax-refund-platform/2274343?utm_source=chatgpt.com

Wynen, J., Boon, J., Kleizen, B., & Verhoest, K. (2020). How multiple organizational changes shape managerial support for innovative work behavior: evidence from the Australian public service. *Review of Public Personnel Administration*, 40(3), 491-515. https://doi.org/10.1177/0734371X18824388

Xu, J., & Wang, B. (2018). Intellectual capital, financial performance and companies' sustainable growth: evidence from the Korean manufacturing industry. *Sustainability*, 10, 4651. https://doi.org/10.3390/su10124651

Yao, Q., Tang, H., Liu, Y., & Boadu, F. (2024). The penetration effect of digital leadership on digital transformation: the role of digital strategy consensus and diversity types. *Journal of Enterprise Information Management*, 37(3), 903-927. https://doi.org/10.1108/JEIM-09-2022-0350

Yi, C.G. (2012). Intellectual capital indicators for the Korean public research institute. *International Journal of Intelligent Enterprise*, 1(3-4), 199-214. https://doi.org/10.1504/IJIE.2012.052553

Zhang, L., & Wang, J. (2018). Research on the relationship between relational capital and relational rent. *Cogent Economics and Finance*, 6(1), 1-19. https://doi.org/10.1080/23322039.2018.1431091

Zhenjing, G., Chupradit, S., Ku, K.Y., Nassani, A.A., & Haffar, M. (2022). Impact of employees' workplace environment on employees' performance: a multi-mediation model. *Frontiers in Public Health*, 10, 1-13. https://doi.org/10.3389/fpubh.2022.890400